4894

IN THE CIRCUIT COURT OF OHIO COUNTY,
WHEELING, WEST VIRGINIA

IN RE:
TOBACCO LITIGATION — CASE NO. 00-C-6000
MEDICAL MONITORING CASES

* * *

JURY TRIAL

Whereupon the above-entitled matter came on for hearing before the Honorable Arthur M. Recht at the Ohio County courthouse, Wheeling, West Virginia, and the proceedings are as follows.

* * *

October 30, 2001
VOLUME 18-B
1:10 p.m.
* * *

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I N D E X

WITNESS:	PAGE
Jerry Whidby,PhD,	
Cross by Mr. Segal	4899
Redirect by Mr. Klein	4902
Recross by Mr. Segal	4914

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E X H I B I T S

EXHIBITS:	MARKED:	ADMITTED:
Nos. RJR 8131, RJR 7034, RJR 7035, Lorillard 1192, Lorillard 10669, Lorillard 1157, Lorillard 11577, Lorillard 11576, PM04912, PM10910 RJR 26583, RJR 26585, RJR 26383, RJR 8959, RJR 8961, RJR 6606, RJR 6605, RJR 6637		4954
RJR Exhibits Nos. 26442, 26646,26649, 26655, 26657,26658, 26388, 26686, 2638, 2673, 26391, 26627, 26382, 26687, 6523, 26621, 8221, 26616, 26685, 7209, 7528 and 26379		4917

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(There are other counsel representing interested parties also present in the courtroom gallery.)

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Monday Morning Session
October 30, 2001
* * *
P R O C E E D I N G S
* * *
1:10 p.m.

(In open court with a jury present.)

THE COURT: Be seated, please. All right, Mr. Segal.

MR. SEGAL: May it please the Court. Good afternoon, laidies and gentlemen.

CROSS-EXAMINATION

BY MR. SEGAL:

Q Dr. Whidby, there are three stickies here. You you may not know that is good news, but I think the jury knows that is good news.

Dr. Farone was -- during the time you were both at Philip Morris together, he was always in a superior position in the sense that he was either your boss or higher up in the company than you were; is that correct?

A That's correct, yes.

Q That was true for the entire time that he was there while you were there?

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A Yes, it was.

Q And indeed I believe, at a certain point, did you not get promoted to be right next in line behind him? Is that correct?

A There were a number of people who were managers under him, so I was one of the people.

Q Dr. Osdene, he was always at a higher position than you were during the time?

A Yes, sir, he was.

Q And when did he retire, ballpark, if you recall?

A Probably early '90s.

Q Early to mid '90s?

A Yeah.

Q And he is still alive?

A Yes, sir, he is, as far as I know.

Q Dr. Seligman was also senior to you in the Philip Morris structure?

A Yes, he was.

Q And he is still alive?

A No, sir, he is deceased.

Q Dr. Wakeham, he was also senior to you in the Philip Morris structure?

A Yes.

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Q Is he still alive?

A No, sir, he is deceased, too.

Q I believe you testified that you have always believed that cigarettes are hazardous?

A Yes, I have.

Q And then Mr. Klein said, well, Philip Morris admits that on their web site.

Do you recall those questions?

A Something like that, yes.

Q But you have believed that cigarettes were hazardous; even before you got to Philip Morris, you believed that; correct?

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A Yes, I did.
Q But they didn't admit that on the web site until 1998, '99?
A I don't know when they put it on the web site.
Q You do know it's been very recently, within the past three or four years?
A It's been within that time period, I believe, yes.
Q In your own view, in your own view as a scientist, the risks -- you talked about with, Mr. Klein asked you about, lung cancer -- the risks of

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cigarettes far outweigh any benefit to the consumer?
You believe that, don't you?
MR. KLEIN: Objection, Your Honor.
THE COURT: Overruled.
BY MR. SEGAL:
Q Do you want me to repeat it?
A I know what the question is, I think. I'm just thinking.
In general terms, I think people shouldn't smoke. So by that answer, I think, yes, the risks outweigh the benefits.
Q And you also hold the belief and have so testified before under oath that the benefits certainly don't outweigh the risk? Isn't that correct, also?
A I think that's what I just said.
MR. SEGAL: Thanks for answering my questions. Mr. Klein may have some.
THE COURT: Redirect examination.

REDIRECT EXAMINATION

BY MR. KLEIN:
Q Dr. Whidby, you were questioned by Mr. Segal about biological testing of a Marlboro cigarette off the shelf, commercial Marlboro cigarette; correct?
A Correct.

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Q And questioned about biological research of Marlboro Lights off the shelf; correct?
A Correct.
Q And the Merit?
A Right.
Q Now, you testified earlier about reference cigarettes.
What's the FTC tar reading of this cigarette, Marlboro Red?
A 15 or 16, something in that category.
Q Is there a reference cigarette which approximates a filter tip, 15 or 16 FTC tar cigarette?
A Yes, there is something in that category.
Q FTC tar of Marlboro Light?
A 10 or 11.
Q Is there a reference cigarette which approximates an FTC 10 or 11 filter tip cigarette?
A Some similar to that, yes.
Q Merit? Is there a reference cigarette which approximates a Merit?
A Yes.
Q That's one 1 milligram of tar.
A I believe there is an ultralow reference cigarette.

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Q Did Philip Morris do biological testing on each of those reference cigarettes?
A To the best of my knowledge, they evaluated reference cigarettes in those categories, yes.
Q What did that tell Philip Morris, as far as you know, about whether you should reduce tar?
A I'm not an expert in this area, but my general understanding is that reduced tar reduces the biological activity.
Q Therefore, it was your view, was it, that it was proper to reduce tar?
A Yes, it was.
Q Now, you were asked by Mr. Segal if you were aware of any comparative testing at Philip Morris comparing Marlboro Red to a Marlboro Light to a Merit, an I'll take it further to a Winston, to other products, and your answer was, if I heard you correctly, that you were not aware of any such testing at Philip Morris?
A That's correct, yes.
Q Were you aware that R.J. Reynolds Tobacco Company did comparative biological testing of products from the shelf and tested Marlboros and Winstons and many other brands?

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A Yes, that's data they published.
Q That's in a published study?
A Yes.
Q Is that called the Steele study?
A I believe that's correct.
Q What did that study show you about whether a reference cigarette is a good measure of a commercial cigarette?
A Again, I'm not a toxicologist, but if I read their report and I interpret it like they have interpreted it, what it says is that the reference cigarettes are like the commercial cigarettes.
Q What did that tell you about whether or not you should continue to try and reduce tar?
A Reducing tar is the right thing to do.
Q You were shown a document by Mr. Segal with some handwritten notes, subject of genotoxicity testing program by Dr. Rodgman, handwritten notes.
Do you remember those?
A Yes, but it was not from Dr. Rodgman.
Q To Dr. Rodgman?
A Yes, sir.
Q On page 2 there was a reference that was read to you by Mr. Segal.

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What I want you to do, Doctor, is just assume that the assumption or finding or statement made by Chin Lee -- assuming that's Dr. Lee -- was correct. And that is that on -- assume for the moment that low tar, a milligram of low tar, may reflect a higher mutation rate than a milligram of a higher tar cigarette. I want you to assume that's correct.
You don't know whether that's correct?
A No, sir, I don't.
Q Okay. When you do an FTC tar yield of a Marlboro Red, you get what?
A 15 or 16.
Q (Indicating.)

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A 10 or 11.
Q A Merit?
A About a 1.
Q Marlboro Red, 16 or 17 times the amount of tar than a Merit?
A About that.
Q Marlboro Light, 11 times the tar --
A 10 or 11, yeah.
Q Do you have a conclusion that less is better?
A Yes.
Q You were also asked about the Cambridge

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cigarette and, I think, the Now cigarette, Merit cigarette. Mr. Segal questioned you about your knowledge of what efforts the company's made to market those cigarettes.
I think you answered basically you had no information?
A That's correct.
Q Let me test it one bit further and see if you know anything.
Do you know whether or not the Cambridge cigarette box, the virtually no tar cigarette,. 1 milligrams of tar, was introduced with the largest advertising campaign of any new cigarette every? Do you know whether that's so or not?
A I have heard that, yes.
Q Did you folks at Philip Morris try and make the Cambridge cigarette because you wanted to sell it?
A Yes, we did.
Q You didn't want it to sit on the shelf somewhere did you?
A No.
Q Did you want people to buy it?
A Yes.
Q Does Philip Morris have marketing people and

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marketing professionals that launched new products?
A Yes, they do.
Q Was it your expectation and hope that it would work in the marketplace?
A Yes, it was.
Q Did you spend a lot of time and money and effort doing that?
A Yes, we did.
Q Is the same true for Merit?
A Yes.
Q Did you think Merit was a breakthrough?
A Yes, I did.
Q Did you think that -- how has it done?
A It was done --
Q How has it done?
A Oh, how has it done.
Q In the marketplace.
A It's been reasonably successful. It's not the best-selling brand, but it's still in the marketpalce. It still sells a fairly significant number of cigarettes.
Q Mr. Segal asked you about a document authored by Dr. Wakeham back in 1973?
MR. SEGAL: Yes.

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BY MR. KLEIN:

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Q 1973. That was the document that's very, very difficult to read.
A Right.
Q Do you have that?
A Yes, sir, I do.
Q At the bottom of the first page it's a reference to the intense pressure to develope a safe cigarette, and then it goes on to say, "The European industry has agreed that smoking is harmful and is hard at work to develope a less hazardous cigarette."
Are you with me?
A Yes.
Q Have the Europeans succeeded in making a cigarette which is safe?
A No, sir, they haven't.
Q Has every major advance in cigarette design come from the American companies?
A Basically, yes.
Q Not the European companies?
A No.
Q Not the Asian companies?
A No, sir.
Q Now, Mr. Segal also read you a portion of

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president John Kennedy's speech about getting a man on the moon, and he made a reference to if you spent a penny a pack more you'd have all this amount of money.
Let me ask you a semiserious question and then a serious question.
The semiserious question is this: You are aware, are you not, that America was discovered, at least according to many, by Christopher Columbus?
A That's what's said, yes.
Q And he sailed here in three little ships; the Nina, Pinta and the Santa Maria?
A Correct.
Q Funded by the Queen of Spain, Queen Isabella?
A Correct.
Q Do you think if Queen Isabella had given Christopher Columbus all the gold in the Spanish armada, Christopher Columbus could have flown here in a jet in 1492?
A No, sir.
Q Ten years later?
A No, sir.
Q 50 years later?
A No, sir.
Q Why not?

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A The technology wasn't available.
Q Has this country and American public health and scientists around the world studied cancer?
A Yes, sir.
Q Have they studied it intensely, as far as you know?
A Yes, sir.
Q Do we understand the causes of all kinds of cancer they are?
A No.
Q Do we have remedies for it?
A No sir.
Q Is that because there hadn't been enough money spent?

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A No, sir.
Q Now, did Philip Morris have an interest in its consumers when it was trying to make low-tar cigarettes?
A Yes.
Q Did Philip Morris have an interest in public health when it was trying to make low-tar cigarettes?
A Yes.
Q Did Philip Morris have an interest in its own corporate welfare in trying to make a cigarette which
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could be safe?
A Yes, I believe so.
Q If you and I, Dr. Whidby, were to go off on your fishing boat and come up with a secret for a safe cigarette that really worked, that we could prove, do you think we would be wealthy people?
A I could have a whole lot bigger boat.
Q Now, finally, you were shown a comparative chart side-by-side chart,-- I don't have the side-by-side, but this is the chart that we used in your testimony today.
A Correct. Yes.
Q This portion of the chart and the time line, where did that come?
A Dr. Dietrich Hoffman's paper.
Q And is that the exact time line that Dr. Dietrich Hoffman used?
A I believe it is, yes. We basically copied it out of that report.
Q Now, Mr. Segal pointed out to you that sometime in the mid-1970s or even earlier things started to flatten out in terms of the decrease in the tar and decrease in nicotine?
A Right.
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Q Is it frequently your experience, Doctor, that when you try to do a project like this, you can make a lot of headway at first and then it gets a lot tougher to do?
A Right.
Q And after it started to flatten out, that was the period of time at which Philip Morris made the Cambridge cigarette; correct?
A Correct.
Q A .1 milligram cigarette?
A Correct.
Q That was the point in time where Philip Morris developed the Merit, ultimately y the Merit Ultima?
A Correct.
Q Which had 1 milligram of tar?
A Correct.
Q And R.J. Reynolds came out with the Now product?
A Right.
Q And Brown & Williamson came out with the Carlton product, all after the line started to flatten out?
A Right.
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Q Would you consider those to be advances in cigarette design?

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A Yes.
Q Doctor, if there is any method known to you or to Philip Morris to make a less risky or a risk-free cigarette, would you have done it?
A Absolutely.
MR. KLEIN: Thank you. Nothing further, Your Honor.
THE COURT: Recross examination.

RECROSS-EXAMINATION

BY MR. SEGAL:
Q The Steele test that you just testified you knew something about --
A Yes, I have read it.
Q That was the example which was used to say that comparative testing had been done, biological, as to the toxicity of cigarettes?
A That's the only test I know of, yes.
Q First, they only ran one test on each of the cigarettes; correct?
A I think that's right.
Q Second, they only ran not only on one cigarette, but they only ran the Ames biological test

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on the cigarettes in that project?
A I won't argue with you on that.
Q Last but not least, you testified to Mr. Klein that at Philip Morris you have lots of reference cigarettes?
A Yes.
Q The Steele study looked at only one reference cigarette and said it's about average of all of them; correct?
A I think that's also correct.
Q They didn't have any super low reference cigarettes, super medium reference cigarettes that they were testing in Steele, did they?
A I don't think they did, no.
Q And the last thing -- maybe I misheard you, but with regards to the quest to cure cancer, okay, I mean, we are -- you are not denying the American Cancer Society, the American Leukemia Society, the Children's Cancer Society are all out there begging people to give them money to do more research in their quest to find a cure for cancer? You don't deny that, do you?
A No, they are all asking for money. That's true.
Q In fact, cancer research everywhere in this

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country, researchers are begging, saying, if we just had the funding to do the research, we could probably beat this? That's true, isn't it?
A It's true that they are asking for the money. Whether or not they would beat it with more money or not, I don't know.
Q You don't know. Okay. That's fine.
MR. SEGAL: Thank you, Your Honor.
THE COURT: All right. May this witness now be excused not subject to recall?
MR. KLEIN: Yes, Your Honor.
MR. SEGAL: It's okay with us, Your Honor. Thank you, very much, sir. You may be excused.
(Witness excused.)
THE COURT: Call you next witness, please.

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MR. FURR: You Honor, we would like to publish some documents to the jury.
THE COURT: Take your time.
MS. FORBES: May I approach, Your Honor?
THE COURT: Sure. Just for the record, what we have done is rather than having to approach with each document, there is a entire packet. And you have got the list; right?
THE REPORTER: Yes.

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THE COURT: All right.
MS. FORBES: All of these are Reynolds document numbers, so I will give them as RJR. 26442, 26646, 26649, 26655, 26657, 26658, 26385, 26686, 26386, 2673, 26391, 26627, 26382, 26687, 6523, 26621, 8221, 26616, 26685, 7209, 7528, 26379.
Your Honor, at this time I would move the admission of these documents and ask that I be allowed to publish them to the jury.
THE COURT: Any further comment?
MR. BAKER: No objection.
THE COURT: All right. All of those exhibits will be admitted into evidence and made a part of the record in this proceeding and may be published to the jury at the convenience of counsel.
(Thereupon, RJR Exhibits Nos. 26442, 26646,26649,26655, 26657,26658, 26388, 26686, 2638, 2673, 26391, 26627, 26382, 26687, 6523, 26621, 8221, 26616, 26685, 7209, 7528 and 26379 were admitted into evidence.)
MS. FORBES: This is is the first document, Reynolds 26442. Jason, if you would show the date and the I author. This is March 24, 1964. The author is Eldong Neilson, Biochemical Research.

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Start on page 2. "Biological testing. Ciliastatic assay. An attempt was made to set up ciliastatic assay of Kensler and Battista with as little deviation from their procedure as possible.
"While their paper appears to describe the assay in great detail, it becomes obvious in attempting to duplicate their procedure that many important details are not fully described.
"With the passage of time many changes and improvements have been made, both in the apparatus and in the techniques of handling the animal and the trachea. Satisfactory tracheal performance is now being approached.
"To date, 11 test runs have been made and some preliminary smoke data have been obtained. In one case, a Camel cigarette was tested; and in three cases Lark cigarettes were tested.
MR. BAKER: No counters, Your Honor.
THE COURT: All right.
MS. FORBES: The next document is RJR 26646. Jason, if you would just show the title and the date.
"Industrial Bio-Test Laboratories, Inc., July 29, 1964. This is a letter to Dr. Willard Bright, vice president, R.J. Reynolds Tobacco Company, and if

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you would, show who it's from. J.C Calandra, director.
"Dear Dr. Bright. Enclosed is the sigend letter agreement for your files. We appreciate the

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opportunity to work with the Reynolds research group and look forward to a pleasant and mutually rewarding association.

Attached is this letter, July 16, 1964. Dr. Joseph C. Calandra, Industrial Bio-Test Laboratories, Inc., from R.J. Reynolds.

"Dear Dr. Calandra: I am glad to be able to advise you that we are prepared to move forward along the lines you have discussed with Dr. Nielson.

"By its nature, the research program discussed is incapable of exact definition at this stage. We would propose that this be left to mutual agreement as the work progresses. At the same time, we can appreciate that you may need some minimum level of commitment on our part.

"As the first such study, you agree to determine the ciliastatic activity of at least ten cigarette brands to be selected by us, utilizing a mutually determined modification of the Kensler and Battista method.

"Our present maximum committment for this

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study shall be $82,500."

MR. BAKER: No counters, Your Honor.

MS. FORBES: The next document is RJR 26649. Let's again start with the heading of the document, Jason.

It's an August 28, 1964 memorandum from Dr. Nielson, Biochemical Research, to Dr. Murray Senkus, director of research.

"Biological testing. 1, ciliastatic assay. The respiratory infectino present in the supply of rabbits has continued to retard progress in the ciliastatic assay.

"The evaluation of charcoal filter cigarettes by the ciliastatic assay has continued. Some comparative data have been obtained now for Tempo, Philip Morris Multifilter, Lark and York.

"A comparison of Tempo, Philip Morris Multifilter and Lark cigarettes is shown on the accompaning graph. These assays represent the results from ten Philip Morris Multifilter, ten Lark, and ten Tempo cigarettes.

:It can be seen that there is no significant difference in the results for the Tempo and Philip Morris Multifilter cigarettes. At the fifth puff and

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beyond, these two cigarettes are significantly lower in ciliastatic activity than the Lark cigarettes.

And then this is the graph, chart. "Ciliastatic activity. Comparison of ten Philip Morris Multifilter, ten Tempo and ten Lark." If you would just show the whole graph to the jury.

I don't believe there are any counters.

The next document is RJR26655. Again, this is a research memorandum from R.J. Reynolds dated January 5, 1965, authored by Dr. Eldon D. Nielson, biological research division, to Dr. Murray Senkus, director of research.

"Biological testing. 1, ciliastatic assay. A significant improvement was obtained in the method of mounting the rabbit trachea for use in the ciliastatic assay. In spite of this improvement, however, the

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yield of productive assays remains low. As reported earlier, industrial Bio-Test laboratories are able to perform the ciliastatic assay with a much higher percentage of successes than we are able to do at the present time.

"Two interim reports have been received from industrial Bio-Test Laboratories reporting the results of ciliastatic assay for several brands of cigarettes.

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"In view of the fact that industrial Bio-Test Laboratories can obtain ciliastatic data with considerably greater ease than we can at the present time, we are considering diverting our biological research efforts to other, more productive areas. Ciliastatic assays will continue and a gradual change will be made to a new direction of this research effort."

I don't believe there are counters.

The next document is RJR26657. The date is February 4, 1965. The author is Industrial Bio-Test Laboratories, Inc, interim Report No. 3, to R.J. Reynolds Tobacco Company, "Study of the" Ciliary-Depressant Activity of Cigarette Smoke.

"Summary. The ciliastatic activity of the smoke from three brands of standard cigarettes, Kool, Tareyton and Marlboro, are presented. The smoke from Kool cigarettes has a slightly greater ciliary inhibitory activity than Salem, which was reported in RDR, No. 57.

:Marlboro has ciliary inhibitory activity approximately equal to that demonstrated by Winstons, L&M, Viceroy and Kent. The ciliary inhibitory activity of Tareyton appears to be intermediate between that of

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the standard filter cigarettes and the charcoal group, fill Philip Morris, Lark and Tempo."

There are no counters to that.

The next document is RJR26658. Look at the heading on it. It's March 24, 1965. Author, Industrial Bio-Test Laboratories, Inc., "Interim Report No. 4," to R.J. Reynolds Tobacco Company, "Study of the Effects of Cigarette Smoke on Ciliary Activity."

"Summary: The ciliastatic action of 11 commercial brands of cigarettes was measured and compared. There appears to be no significant difference in the ciliary-depressant activity of the nonfilter and regular filter cigarettes studied.

"However, the nonfilter cigarettes were slightly greater inhibitors of ciliary activity for the first three consecutive puffs than were the regular filter cigarettes.

"The effect of cigarette smoke on the ciliary activity of the rabbit trachea in vitro utilizing various brands of cigarettes was studied. This report presents the results of all tests performed on 11 different brands representing three types of cigarettes; i.e., regular filter, charcoal filter and nonfilter cigarettes.

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"The nonfilter cigarettes are listed. Chesterfield Kingsize, Pall Mall, Camel, Lucky Strike.

"B, regular filter cigarettes: Winston, L&M, Viceroy, Kent Kingsize.

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"C, charcoal filter cigarettes: Lark, Philip Morris and Tareyton.

No counter?

MR. BAKER: No.

MS. FORBES: Next is RJR26385, June 27, 1944, a memorandum from RJR research, author Franklin Loew, division of biological research. The title, "Studies of Cigarette Smoke Irritation, Development of a Biological Test and Some Preliminary Results."

"Object: To develope a biological test capable of determining objectively the extent and nature of cigarette-smoke irritation and to use such a test in evaluating RJR cigarette brands and experimental cigarettes. The ultimate goal is to provide the means for chemical definition of smoke irritation.

"II. The Test as Currently Performed: It must be remembered that there was no standard result in existence with which to compare our test results. As a consequence, the test has undergone periodic

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modification when test results, by virtue of inconsistency or unreliability, warranted change.

"Cigarettes are smoked through Cambridge filters by the National Products section of the Chemical Division at our request.

"The smoked, round Cambridge filter pads then are cut into quarter-inch squares, 16 squares per rounds pad, by hand scissors.

"The pieces are weighed on an analytical balance and then implanted into either-anestetized rats. 48 hours after implantation the rats are sacrificed with an ether overdose and the filters are carefully removed and weighed."

"IV. Experimental Results. All the results reported in this section were obtained using the four-filter-pieces per rat test.

"a. Comparison of RJR Brands on an Equal Solids Weight Basis."

Jason, if you would just show this table, three, Table III, which is a comparative irritation of RJR brands equal amounts of solids.

Biological samples are numbered, and then the brands, Winston, Salem, Tempo, Camel, Camel filter and Control, are given.

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MR. BAKER: No counters, Your Honor.

MS. FORBES: The next document is RJR26686. This is an internal research memorandum from R.J. Reynolds Tobacco Company. It's dated November 18, 1966, authored by Franklin Loew, division biological research.

"Summary of work performed on the bioassay for cigarette smoke irritation since RDR, 1966, No. 24, June 27, and RDR1966, No. 31, August 4.

"Object: To briefly remark on the further studies on cigarette smoke irritation.

If you would just blow up the summary.

"The bioassay for cigarette smoke solids irritation has been examined for its time-course variation, its relationship to the adrenal cortex and its performance in the presence of certain drugs.

"No unequivocal results were obtained. The

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bioassay for vapor-phase irritation has been further studied and used.

"The following list indicates the types of experiments performed and the notebook pages on which they are recorded."

And then, Jason, let's just page down -- go back to the first page, beginning with the description

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of the research and blow that up.

"Effect of low levels of menthol, time-related study, effect of hydrocortisone, effect of milligram citrate and malate, effect of menthol."

"Comparison of Winston and Marlboro. Comparison of Salem and Camel menthol filter. Comparison of Winston and Marlboro. Comparison of RJR brands. Comparison of RJR brands. Comparison of Winston with Winston-type competitive brands. Salem dose-response. Comparison of Salem to Salem-type competitive brands."

I don't believe there are any counters to this document.

MR. BAKER: There are not --

MS. FORBES: The next document is RJR26386. It's another internal RJR research memorandum. The date is November 23, 1966. The author is Eldon Nielson, biological research division, to Dr. Murray Senkus, director of research.

"A, Biological Testing. I. smoke Mildness Studies. Competitive brand comparisons have been made in two series of cigarettes, king size filters and king size menthol filters."

Just show that whole table.

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Table I, "Smoke Mildness, Competitive Brand Comparisons, King Size Filters." The cigarette is listed. Marlboro, Pall Mall filters, Winston, Lucky Strike filters, Viceroy, Chesterfield filters, L&M, Kent and Control.

Table II, "Smoke Mildness Competitive Brand Comparisons, Menthol Filters." Cigarette, listed and tested, Salem, Oasis, Kool, Marlboro Menthol, Alpine, Newport, Lucky Strike Menthol, Spring, Belair.

"There is probably no difference in the mildness store of Marlboro, Pall Mall filters, Winston and Lucky Strike filters. The difference between that group and Viceroy, Chesterfield Filters and L&M is probably significant, as is the difference between the latter group and kept.

"It should be noted that only three cigarettes per filter were smoked so the Pall Mall cigarettes as compared to four cigarettes for the other ones and five for Kent. However, the solids weight in all cases was fairly uniform.

"In regard to the menthol cigarette series, it is possible that these cigarettes fall into three classes, as well, but any conclusions should be made conservatively until the statistical analyses are

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returned."

MR. BAKER: No counters.

MS. FORBES: The next document is RJR26673. This document was authored by Dr. Nielson, and it was sent to Dr. Senkus, and the date is -- it's pretty hard

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to see, but the date is April 13, 1967. The title, "Comparison of Response to Several Brands of Cigarettes on the Cat Trachea Test."

"Several interim reports have been received from Industrial Bio-Test Laboratories, Inc., on the effect of individual cigarettes on the cat trachea test. The purpose of this report is to assemble pertinent data for a comparison for the various cigarettes.

"Comparative brand data are shown in the following table."

Just blow up the whole table. "Comparison of Smoke From Various Brands of Cigarettes on the Cat Trachea Test." Charcoal filter cigarettes tested, New Tempo, Old Tempo. Filter, Winston-Salem. Nonfilter, Chesterfield, Lucky Strike and Camel."

I don't believe there are counters.

MR. BAKER: No counters.

MS. FORBES: The next document is RJR26391.

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It's a report of Industrial Bio-Test. Let's get the date and the full title.

"Report to R.J. Reynolds Industries, Inc. Smoke Irritancy of Several Brands of Cigarettes in the Mouse, december 21, 1970.

The first page, "Introduction: In an attempt to evaluate the irritancy of the smoke of various brands of cigarettes, a technique was developed similar to one described by Richard Binns, Huntingdon Research Center, Huntingdon, England.

"Summary: The results of the present test were predicable with one exception. The Kent cigarette smoke was slightly higher in irritancy than the Winston or Marlboro. This was unexpected since the TPM delivered by this cigarette is less than that delivered by either Marlboro or Winston. The Kent filter is also a high filtration type as opposed to the regular cellulose acetate filter used in the other two cigarettes.

"IV, Results. Winston cigarettes were compared with Carlton, Kent, Lark, Marlboro and True. Each regression line was tested for linearity, and all lines proved to be linear.

"The significance of a difference between

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regression coefficients of Winston cigarettes versus the other brands was tested, and there existed no significant difference between Winston and Marlboro, Kent and Lark. However, there was a 95 percent significant difference noted between Winston and True and Carlton."

MR. BAKER: No counters, Your Honor.

MS. FORBES: The next document is RJR26627. It is an internal Reynolds document. The date is January 27, 1977. The subject is, "Ames Mutagenicity Study, Cigarettes.

"We are sending to your attention Winston Kingsize, Salem KS, Now Regular, Vantage Regular and Camel filter cigarettes which were fabricated for the Ames mutagenicity study.

"As outlined in Dr. Rodgman's memo of December 16, 1976, the study is designed to evaluate four levels of casing and top-dressing flavor for each

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brands. I have attached a listing of the L-numbers, number of boxes of cigarettes submitted, casing levels and top-dressing levels for the five brands being studied."

MR. BAKER: No counters.

MS. FORBES: The next document is RJR26382.

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Let's blow up the title. "A Comparative Study of the Mutagenicity of Tobacco Smoke Condensates."

Jason, if you would show that it is from BioResearch Laboratory Limited. The date, August 30, 1977. And if you would also show who it is for. R.J. Reynolds Tobacco Company, Winston-Salem, Attention Dr. Alan Rodgman, research department.

:Summary. The mutagenic activities of five tobacco smoke condensates, each containing four samples, were evaluated in an in vitro microbial mutagenicity bioassay.

"Mutagenicity Tests: BioResearch Laboratories, Pointe Claire, P.Q.

"To determine whether the cigarette combustion products from the major casing materials (glucose, fructose, sucrose, cocoa, licorice and glycerol, propylene glycol), significantly influence the mutagenicity as measured in the Ames test, the following experiment was conducted.

"Cigarettes (Control) fabricated with the Winston 85 tobacco blend, Winston 85-type filter and Winston 85-type paper but containing no added casing materials were smoked. The total particulate matter collected and forwarded to bioresearch at dry ice

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temperature for Ames testing.

"Salmonella strains TA1538 and TA98 were used with S-9. From their analysis of the data obtained for the 10 sets of data (5 pairs of cigarettes, 2 salminella strains) BioResearch personnel concluded that, in each case, the smoke particulate matter from the control cigarette was slightly more mutagenic than the smoke from the casing materials - containing cigarettes.

"This may appear to be an unusual observation, but it is readily explained when one realizes that the casing containing cigarettes deliver considerable glycerol, which obviously serves as a diluent for the mutagens in the smoke particulate matter. Glycerol is nonmutagenic.

"These results indicate that the casing materials (glucose, fructose, sucrose, cocoa, licorice, glycerol, propolene glycol) used in the Winston 85, the Salem 85, the Vantage 85, the Camel filter 85 and the Now 85 do not generate any significant quantities of mutagenic compounds in the particulate matter during the cigarette smoking process."

MR. BAKER: No counters.

MS. FORBES: The next document is RJR26687.

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This is an interoffice RJR memorandum. It's date is November 14, 1977.

"Subject: Toxicological Data on Potentialal Flavorants to Dr. Donald Piehl from W.Y Rice, Jr.

First paragraph. "In the course of developing new propietary flavorants, we have reached

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the point where we must have some guidelines for safety evaluation of these materials. It has emerged from our existing procedure to find new flavorants as a potentially useful compound.

"Recently it was included in a formulation for a product which could possibly go to the market in the near future. However, because of the lack of safety evaluation on this compound, in particular lack of toxicological data, it was withdrawn from the formulation.

"I suggest we also seek an opinion of this list from an outside consultant. He would be able to advise us if the data generated from these tests are sufficient for our purposes and on how to interpret the data. I can suggest the names of some possible consultants.

"It is important that these safety evaluation definitions be made soon because we cannot use any new

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flavorant until we have proper toxicological data. Currently we have four compounds at a developmental stage requiring such information."

And there are no counters?

MR. BAKER: No.

MS. FORBES: The next document is RJR6523. It's an internal Reynolds memorandum. The date is September 28, 1977, from Dr. Allen Rodgman to Morgan Huntter.

The subject: "Cigarette Smoke and Ames Test.

"Your question to Dr. Lauriene on our experience with the Ames test and cigarette smoke condensate was referred to me. We have no in-house experience in this area at the present time, but our 1978 program includes a modest effort.

"However, in 1977 we did contract such a study to BioResearch in Montreal. This study involved the Ames testing of several proprietary flavorants and flavorant systems per se, plus the effect on various tobacco additives (flavorants, casing materials, humectants) on the specific mutagenicity of cigarette smoke.

"None of the proprietary flavorants or flavorant systems showed mutagenicity. Smoke

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condensates from cigarettes with or without added flavorants, humectants and/or casing materials do show mutagenicity.

"Selected portions of the results obtained in the study contracted to BioResearch are shown in Figures 1-4, for Winston 85, Salem 85, Vantage 85 and Now 85 respectively."

MR. BAKER: No counters, Your Honor.

MS. FORBES: The next document is RJR8221, internal Reynolds memorandum. The date is May 9, 1983, authors Chin Lee, Elizabeth Reed, department fundamental R&D. Title, "Ames Test on Smoke Condensates, A Summary."

"Object: To compile and review all the past work and memos concerning Ames test results on smoke condensate and smoke-related compounds.

"Summary: This memorandum summarizes all the interoffice memoranda written by the authors since 1978 to date on Ames testing of cigarette smoke/condensates

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and/or specific smoke condensate components.
"Introduction: The R&D department of RJR has been engaged in mutagenicity testing of cigarette smoke condensate and tobacco additives by the Ames Salmonella/microsome efforts since 1978.

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Jason, if you would go to the tables. Appendix C, I guess. Table 1. "The Response of Salmonella TA98 toward, CSC," cigarette smoke condensate "of Various Brands of Cigarettes.
Actually, Jason, if you would back up two pages there should be -- yes. It's Appendix C. Pop up to the top.
"Ames Test on CSC," cigarette smoke condensate, May 15, 1980.
"Twenty-four domestic brands of cigarettes with various FTC tar contents were smoked and their smoke condensates were subjected to the Ames test. The main objective of the study is to compare the mutagenicity of each brand using the Ames test as a quantitative measure.
"An additional objective of the study is to evaluate the feesibility of making quantitative comparison for the mutagenic activity by a simple assay, such as Ames test."
"In summary, the following conclusions are drawn:
"1. The CSC of low-tar cigarettes are generally less mutagenic than those of high-tar brands per cigarette.

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"3. Satisfactory dose-response data were obtained for CSC by the Ames test. However, the reproducibility of the results needs further improvement. Once the reproducibility is achieved, the Ames test would be a useful quantitative measure of CSC for mutagenic testing.
"Table 1. The Response of Salmonella TA98 Toward CSC of Various Brands of Cigarettes."
Jason, show the table, down the list of brands. Doral II, Vantage KF, Winston Light KF, Salem KFMSP, Winston KFSP, Salem 100 FM, Camel KF, Camel Light KF, Merit KF, B&H Light 100 FSP, Marlboro KFSP, Winston KFSP, B&H 100 FSP, Kent III KF, Triumph KF, True KF, Kent Golden Light KF, Viceroy Rich Light KF, Winston KFSP, Newport KFMSP, Marlboro Light 100. Just show the whole chart with the headings. Blow up those headings, just what is charted. Okay.
MR. BAKER: No counters, Your Honor.
THE COURT: All right.
MS. FORBES: The next document is RJR26616. It's an internal Reynolds research report. Blow up the heading.
"RJR Ames Testing of Flavors, Extracts, Miscellaneous Samples, 1978-1979, 1980." If you would

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just show the chart. See if you can blow that up a little bit better.
The next page. Let's look at the heading. "RJR Ames Testing of Flavors, Continued."
Let's go to 1981 and show that list. Can you just scroll down there. Let's take it chrono. Go to 1982, and blow up that list.

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"3, 5-dimethyl pyridine. Aldehyde C-14, cinnamic aldyhyde, Crotonic acid, isoeugenol and Naarden."

1983 list. If you could just scroll down that.

Let's go to the 1984 list. "Artificial Chocolate 106. Artificial chocolate 67.674, Bergamont Oil, Burley 52.646, Chocolate for Tobacco 57.917, Hazelnut, imitation butter 52.453, Malt Rosstedtter 52.453, Tamarindo, tobacco Enhancer 52.636, Tobacco Flavor 82.0551, Tobacco Mint 4357."

Go to the 1985-86 list. Rather than read those, just look down that list briefly.

Let's go to the 1987 list. And just scroll down that list. This is the 1987 list continued.

Let's go to the next page. Title, "1988 Flavors Tested In-House." Let's just scroll down that

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list.

I don't believe there are any counters. I'm sorry, one more. "1988 Flavors and Extracts Tested In-House, Continued." Just continue to scroll down that list.

There are no counters?

MR. BAKER: That's correct.

MS. FORBES: The next document is RJR26685. This is additional Ames testing data on cigarette samples from R.J. Reynolds. You can see it's titled, "Ames Testing on Cigarette Samples, 1978-January 1985."

Let's look across the header there, please, Jason. The test dates, the sample description, the test cultures, the SN Ames test and the notebook pages the testing was done on.

Scroll down that list. 11-19-79, for example, cigarette smoke condensate, "Winston, Marlboro. 12-11-79 Ammoniated CF flue-cured Winston, old versus Marlboro."

"12-19-79, CSC Winston Old, Winston-B, Marlboro and Camel filter."

On January 7, 1980, "CSC: Winston Old, Winston B, Marlboro and Camel Filter."

January 29, 1980, "CSC: Marlboro versus

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Winston B."

Let's go to the 1980 brand tetst. Date, March 4, "80, "Brand Test, Vantage, Camel, Winston Light, Winston, Salem, Doral II."

March 6, 1980, brand test, Merit, Marlboro, Camel Light, Winston, B&H Light, Marlboro Light and B&H 100.

March 11, 1980, brand test, Kent, Golden Light, Newport, Triumph, Viceroy, Rich Light, True, Kent III and Winston.

March 12, 1980, brand test, Carlton, Kool, Merit, Carlton 100, Kool Super Light, Viceroy and Winston.

March 25, 1980, brand test, Marlboro, Camel Light, Winston, B&H 100, Marlboro Light 10100 and Merit.

March 26, 1980, brand test, Carlton, Kent Golden Lights, Doral II, Kent III, Merit, Marlboro, Vantage and Winston.

Continuing with the report, August 27th,

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1982, cigarette smoke condensate, Camel Light Control.
On June 29, '83, cigarette smoke condensate, Winston versus Marlboro.
January -- I'm sorry, that's July 13, 1983.

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Cigarette smoke condensate, Winston KFSP and Marlboro with and without filters.
Same date, July 13, 1983, cigarette smoke condensate, Winston and Marlboro, with and without filters.
November [sic] 2, 1983, cigarette smoke condensate, Winston Ames testing.
The next chart shows fractionation study for Merit. If you would just show that whole column, Jason. That's a list of the test data.
Go to the next page. August 24, 1983, comparison of filters, Winston, Lark and Tareyton.
August 24, 1983, cigarette smoke condensate, Winston with Lark, Tareyton and Winston.
September 23, 1983, Winston 85 with and without filter, toxicity test.
I don't believe there are counters.
The next document is RJR7209. It's a Reynolds report. It's titled "Ames Report". It's to Rhonda Steele from Jerry Avalos. The date is May 26, 1994/June 9, 1994. "Cigarette Market Update Study. A Table of Product Identifications along with milligram per tar cigarette values as reported on pages 2 and 3 of this report."

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And let's go to the top of the table. It's "Sample Identification," and then the miligram of tar per cigarette is listed. Names of the brands tested are also provided. Rather than read this whole list, if you just scroll down.
The next part of this report goes on, sample identifications provided, the strains, the revertants per milligram for tar, the revertants per cigarette, strain TA 100, the revertants per milligrams of tar and the revertants per cigarette is provided.
Again, just to give the jury the flavor of the chart, scroll down the brands tested and the results provided.
Let's go to the next document, rJR7528. This is a publication by R.J. Reynolds., "Mutation Research, Genetic Toxicology Testing. A comparison of the mutagenicity of mainstream cigarette smoke condensates from a representative sample of the U.S. cigarette market with a Kentucky reference cigarette (K1R4F)." Rhonda Steele is listed as the main author. Then if you would show her identification. R.J. Reynolds Tobacco Company, Bowman Gray Technical Center, Winston-Salem North Carolina.
Jason, let's just blow up the title up here,

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the top of the journal. It was published in "Mutation Research" and that's 1995. A comparison of the mutagenicity of mainstream cigarette smoke condensates from a representative sample of the U.S. cigarette market with a Kentucky reference cigarette."
Let's go to the abstract. The Salmonella mutagenicity assay has been used to investigate the mutagenicity of cigarette smoke and cigarette

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condensate.
"The Kentucky reference cigarette is designed to be representative of full-flavor low-tar cigarettes sold in the United States and to serve as a reference standard for comparative studies on the chemistry and biological activities of cigarette smoke and condensates.
"The objective of this study is to determine if the mutagenicity of mainstream smoke condensate from the Kentucky reference cigarette (K1R6F) as measured by the Salmonella mutagenicity assay is representative of the mutagenic activity of U.S. cigarettes.
"Mainstream smoke condensates prepared in dimethyl Sulfoxide from the K1R4F and 73 brand styles representing greater than 79 percent of the total U.S. cigarette market were assayed using Salmonella

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ryphumunum TA98 and TA100 at concentrations of 0, 25, 50, 75, 100, 125 and 250 micrograms per plate. These results demonstrate that the K1R4F is a representative model for the U.S. cigarette market in comparative Salminella mutagenicity studies using mainstream smoke condensates."
"Introduction: The K1R4F cigarette was developed jointly by the U.S. National Cancer Institute, the Agriculture Research Service of the U.S. Department of Agriculture and the University of Kentucky Tobacco and Health Research Institute, Lexington, Kentucky, to serve as a reference cigarette for experimental purposes.
There are two articles cited; Davis, 1984, and Sullivan, 1984.
"The K1R4F is one of a series of reference cigarettes with each series providing cigarettes yielding different amounts of smoke components; e.g, tar, total particulate matter, minus nicotine and water, nicotine and carbon monoxide.
"The intention was to provide standard cigarettes to use in studies investigating the chemical and biological aspects of cigarette smoke, thus serving the purpose of providing a basis for the comparison of

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data collected in various laboratories. Using the Salmonella mutagenicity assay, this study determined the mutagenicity of mainstream smoke condensate (tar) from a sample of 737 brand styles purchased at retail representing over 70 percent of the U.S. market.
"The mutagenicity of these condensates was compared to that of the K1R4F to determine if the mutagenicity of the K1R4F as assesed by the Salmonella assasy is representtive of the average mutagenicity of U.S. cigarettes.
3, Results. When assayed with TA98, no significant differences, less than P is greater than .05, where observed between the means of the U.S. market mainstream smoke condensates and those of the K1R4F on a revertants per milligram condensate or revertants per cigarette basis, using nonlinear and linear regression models.
"Figures 1 and 2. Similarly, no significant differences, P greater that .05 were observed in mean mutagenicity of U.S. market and K1R4F condensates assayed with TA100 and compared as revertants per

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milligram condensate and revertants per cigarette. Figures 3 and 4."

"4, Discussion. The average mutagenicity of

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U.S. market and K1R4F mainstream cigarette smoke condensates assayed with the Salmonella mutagenicity assay were not significantly different on a revertants per milligram condensate or revertants per cigarette basis for a sample representing greater than 70 percent of the U.S. market."

"In conclusion, the mutagenicity of mainstream cigarette smoke condensate of the reference K1R4F cigarette as measured by the Salmonella mutagenicity assay using strains TA98 and TA100 (S9) is comparable to the average mutagenicity of condensates from cigarettes currently available at retail in the United States.

"Comparisons of average mutagenicity as revertants per milligram condensate and revertants per cigarette using linear and nonlinear progression models produced similar results. These results support the use of the K1R4F as an acceptable reference cigarette for comparative mutagenicity studies for cigarettes available at retail in the United States."

MR. BAKER: No counters, Your Honor.

MS. FORBES: One last document, Your Honor. This is RJR 26379. Let's look at the journal.

It says, "Food and Chemical Toxicology," 38,

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year 2000, pages 949 to 962. The title, "A comparison of the mainstream smoke chemistry and mutagenicity of a Representative Sample of the U.S. cigarette market with two Kentucky reference cigarettes (K1R4F and K1R5F). The lead author, T.A. Chepiga. Additionally we have M.J. Morton, P.A. Murphy, J.T. Valos, B.R. Bombick, D.J. Doolittle, M.F. Borgerding and J.E. Swauger. "R.J. Reynolds Tobacco Company, Bowman Gray Technical Center, Winston-Salem, North Carolina."

Let's look at the abstract. "The incorporation of technologies into cigarettes such as filters, filter ventilation, porous cigarette papers, expanded tobacco and reconstituted tobacco sheet has resulted in cigarettes with a wide range of tar yields. The objective of this study was to characterize the U.S. cigarette market according to tar category (i.e. full flavor, full flavor low car, ultra low tar) and to determine whether the Kentucky reference cigarettes K1R4F and K1R5F are representative of the full flavor low tar and ultra low tar cigarettes respectively.

"As a means of characterization and comparison, the mainstream smoke from a representative sample of commercially available cigarettes from each market segment and the K1R4F and K1RF5 Kentucky

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reference cigarettes was analyzed for the presence and level of 18 selected chemical constituents. In addition, a measure of the mutagenic activity of the mainstream smoke condensate from these cigarettes was determined using an Ames Salmonella mutagenicity study.

"Based on the selected analytes measured in mainstream smoke, the K1R4F reference cigarette was generally representative of the full flavor of low tar segment of the U.S. cigarette market. The K1R5F

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reference cigarette was representative of the ultralight segment of the U.S. cigarette market for cigarettes with tar deliveries approximate to it.

"Fortunately, a series of cigarettes has been developed jointly by the U.S. National Cancer Institute, the Agriculture Research Service of the U.S. Department of Agriculture, and the Univeristy of Kentucky Tobacco and Health Research Institute to serve as reference cigarettes for experimental purposes. These cigarettes, generally referred to as Kentucky reference cigarettes, incorporate the principal cigarette design advances that have been introduced on to the market since the 1950s.

"The intention in developing these cigarettes was to provide standard reference cigarettes for use in

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comparative chemical and biological studies of cigarette smoke. As reference cigarettes, they also provide a basis for comparing data collected in different laboratories and at different points in time."

"Materials and Methods. Cigarette sample. For sample selection, the 1995 U.S. cigarette market was initially stratified into 12 different market sections: First, according to "tar" category, full flavor, full flavor low tar, or ultralow tar. Then according to menthol inclusion, menthol or nonmenthol, and finally, according to price, full price or savings."

"The final market sample consisted of 29 brands (according to tar category): 10 full flavor, 11 full flavor low tar and eight ultralow tars. For the purposes of testing, all market cigarettes were purchased at retail. The K1R4F and K1R5F reference cigarettes were obtained from the University of Kentucky Tobacco and Health Research Institute in Lexington, Kentucky.

"Mainstream smoke constituent analyses. The 18 specific chemical constituents were measured a total of three to five times in the mainstream smoke from

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each of the 29 market brands and the two Kentucky reference cigarettes. Arithmetic averages were calculated for each constituent in the mainstream smoke from each of the cigarettes tested. Constituent averages for each tar category (ULT, FFLF, or FF) were then calculated two different ways."

We will look at some tables. "Comparison of the mainstream smoke chemistry and mutagenicity, Table I." Blow that up. Blow it up so you can see the categories of the table right underneath it.

"Mainstream smoke constituent analysis, full flavor low tar brands and the Kentucky reference cigarettes," and across the top it shows the comparison data. If you would just scroll through the chart.

Table II, "Mainstream smoke constituent analyses; ultralow tar brands and the Kentucky reference cigarette." Same thing, tables measuring unweighed average.

Scroll down. If you could show it so the table would look -- instead of in little pieces. Let's look at that it way. That's better. There is the analysis and the data generated.

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The next table, Table III, "Mainstream smoke constituent analyses, full flavor brands."

Next table, Table IV, "Ames Salmonella microsomes plate assay results," and the data is given for full flavor low tar, ultra low tar and full flavor.

"Overall, these results support the use of the K1R4F and the K1R5F as acceptable reference cigarettes for comparative mutagenicity and smoke chemistry studies of cigarettes available in the U.S. marketplace. In this study there was a closer correlation observed between the K1R4F and the selected full flavor low tar brands than that observed between the K1R5F and the selected ultra low tar brands. This was most likely due to the fact that half of the selected brands self-designated as ultra low tar yielded more than three times the tar delivery of the K1R5F.

"Collectively, these observations are noteworthy in light of the tremendous level of diversity present in the cigarettes comercially available in the U.S. marketplace.

"Overall, the results of the present study strongly indicate that both mainstream smoke constituent levels and mutagenic activity on a per-cigarette basis are directly related to the amount of tar delivered per cigarette.

"In short, despite the differences which exist on a buy-brand basis, mainstream smoke constituent levels and mutagenic activity on a per-cigarette basis are well predicted by the FTC tar yield."

MR. BAKER: I only have one counter, Your Honor. That's the date of the article. 2000. If you would blow up the first page, please.

MR. BAKER: "Food and Chemical Toxicology," year 2000, and the page numbers.

MS. FORBES: That concludes that package.

THE COURT: Let's take one of the afternoon breaks now. I think you deserve it.

(Brief break.)

THE COURT: Be seated, please.

MR. FURR: We have some additional documents we would like to publish, Your Honor.

THE COURT: That would be fine.

MS. FORBES: This group of documents is RJR8131, RJR7034, RJR7035, Lorillard 11992, Lorillard 10669, Lorillard 1157, Lorillard 11576, Lorillard 11576, PM04912, PM10910.

The rest of these numbers will be RJR numbers. RJR 26583, RJR 26585, RJR 26383, RJR 8959, RJR 8961, RJR 6606, RJR 6605, RJR 6637.

Your Honor, at this time I would move the admission of these documents and ask that we be allowed to publish them to the jury.

THE COURT: Any other comment relating their admissibility?

MR. BAKER: No, objections, Your Honor.

THE COURT: All right. All of those exhibits will be admitted into evidence and made a part of the record in this proceeding and may be published to the

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jury at the convenience of counsel.
(Thereupon, Exhibits Nos. RJR 8131, RJR 7034, RJR 7035, Lorillard 1192, Lorillard 10669, Lorillard 11576, Lorillard 11577, Lorillard 11576, PM04912, PM10910RJR 26583, RJR 26585, RJR 26383, RJR 8959, RJR 8961, RJR 6606, RJR 6605, RJR 6637 were admitted into evidence.)
MS. FORBES: We would like to do that now and, for convenience to the Court, hand them up all at once.
THE COURT: All right, thank you.
MS. FORBES: The first document is RJR 8131, "Cigarette Ingredients, a complete list and background," R.J. Reynolds, and the date, 1994.

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"We appreciate the opportunity to share with you the list of ingredients use by U.S. cigarette manufacturers and to provide some background about these ingredients.
"On April 13, 1994, R.J. Reynolds Tobacco Company released on behalf of the six major cigarette manufacturers the most current, complete list of ingredients used by the companies.
"You'll see in reading through it that ingredients added to cigarettes are virtually the same as those found in many everyday foods. Each RJR brand contains some, but not all, of these ingredients. For competitive reasons, we cannot identify which ingredients in a brand.
"The fact is that U.S. cigarette manufacturers have provided a list of ingredients added to tobacco to the Department of Health and Human Services, HHS, every year since 1986.
"Congress mandated that HHS review the list and report to Congress any concerns it had about any of the ingredients. At no time has HHS ever submitted a report to Congress or informed us that they had any concern about the safety of any ingredient on the list. HHS has made the list available to several

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congressional subcommittees which requested it.
"Ingredients have been added to cigarettes to improve their flavor, taste and aroma for 150 years. The list of current ingredients falls into three main categories. One is processing aids, like carbon dioxide, which remain in the finished cigarettes in barely detectible amounts, if they are found there at all. Humectants like water and glycerine are also added to keep tobacco from drying out. Finally, flavoring agents like sugars, cocoa, licorice and vanillin are added for flavor, taste and aroma.
"More than 98 percent of the ingredients on this list are approved as food additives by the U.S. Food and Drug Administration have been given the status Generally Recognized As Safe In Foods by the FDA or other expert committees.
"Approximately 99 percent of U.S. nonmenthol cigarettes by weight contain these primary ingredients: tobacco, water, sugars, glycerine, propylene glycol, licorice, cocoa and additional flavors, with tobacco being about 90 percent of that total. Additional ingredients used for favoring compose about .02 percent by weight of U.S. cigarettes.

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"Every ingredient on the list has been

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reviewed at the industry's request by an independent panel of expert toxicologists. Their report, reprinted in this brochure, finds there is no reason to come to any conclusion but that every one of the ingredients added to cigarettes presents no hazard as used.

"The scientists' report states: It is important to recognize that the use of these ingredients has enabled manufacturers to develope cigarettes with lower tar and nicotine yields than would otherwise be available, and the primary issue in safety assessment is whether or not cigarettes are potentially hazardous as a result of the added ingredients. A careful analysis of the scientific data clearly indicates that it is not the case.

"List's Prior Availability. As early as 1964, in hearings before the House Subcommittee on Health and the Environment, the chairman of R.J. Reynolds Tobacco Company told Congress that if the manufacturers' trade secrets could be protected, he believed his company would be willing to supply the list of ingredients then used to congress.

Until 1982, before the same subcommittee, the assistant secretary of health in the Public Health Service of the Department of Health and Human Services

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told Congress, 'I am convinced that the tobacco industry has negotiated with us in good faith and is making all attempts to be responsive to our requests.'

"In 1986 the list was provided to HHS pursuant to Section 7 of the Federal Cigarette Labeling and Advertising Act. The act requires HHS to review the list and inform Congress of any adverse health effects associated with use of the ingredients. No such report was ever made by HHS.

"The lists were also provided to Representative Henry Waxman's Subcommittee on Health and the Environment in 1986 and to Senator Edward M. Kennedy's Committee on Labor and Human Resources in 1990.

"In 1993, the lists were given to Representtive Ron Wyden's Subcommittee on Regulation, Subcommittee on Regulation, Business Opportunity and Technology and to Representative Richard Durbin's Subcommittee on Agriculture, Rural Development, Food and Drug Administration and related agencies.

"Scientists Say Ingredientss 'Not Hazardous'. Six prominent toxicologists have examined the ingredients in cigarettes and determined that they are not hazardous under the conditions they are used.

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"Each toxicologist independently reviewed the scientific data on the ingredients added to cigarette tobacco by the six major U.S. manufacturers. Each scientist independently visited individual tobacco companies to examine the testing and research programs used for the ingredients.

"The Evaluation of Ingredientss Added to Cigarette Tobacco. The authors of this report, whose qualifications are summarized in the appendix, each independently reviewed the scientific data on ingredients added to cigarette tobacco by the six major

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U.S. manufacturers. This report represents their consensus on the safety of the ingredients.

"The material examined was extensive and included the confidential list of the ingredients added to tobacco in the manufacture of cigarettes.

"The authors were also provided with summary data of all relevant published and unpublished toxicity tests and reports, as well as the original publications of data when requested.

"Pyrolysis and Transfer Rate Data. Maximum use levels and annual poundage data for the ingredients were also evaluated.

"Each scientist independently visited the

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individual tobacco companies to examine the testing and research programs used for the ingredients.

"Reports and raw data from the studies were made available and were examined as necessary, and each scientist formed an independent opinion regarding the adequacy of the testing and safety of each ingredient.

"The authors also reviewed the available data on pyrolysis of the ingredients added to cigarette tobacco. Based upon such data from representative ingredients, it has been determined that most volatile ingredients do not pyrolyze in burning cigarettes; i.e. they do not decompose or chemically change as a result of heat, they are transferred intact in smoke.

"Thus, if there is exposure and absorption, metabolism would be similar to ingestion. Among those that do pyrolyze, their chemical similarities to tobacco leaf components and their relatively low levels suggest that they do not significantly alter the composition of tobacco smoke.

"In any event, toxicity from pyrolysis products would be evident in smoking studies, and as indicated above such studies have been negative.

"Based upon analyses of all the toxicological data reviewed by the authors of this report, it was

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concluded that there was no evidence that any ingredient added to cigarette tobacco produces harmful effects under the conditions of use in cigarettes.

"Summary and Conclusion. Ingredients are added to tobacco to aid in processing, retain moisture, add flavor and reduce tar and nicotine yields. They have always been used in comercially manufactured cigarettes in the United States.

"Most are present at extremely low levels. Among those that pyrolyze, the pyrolysis products are not expected to depart significantly from those of additive-free tobacco.

"It is important to recognize that the use of these ingredients has enabled manufacturers to develope cigarettes with lower tar and nicotine yields than would otherwise be available, and the primary issue in safety assessment is whether or not cigarettes are potentially hazardous as a result of the added ingredients.

"A careful analysis of the scientific data clearly indicates that this is not the case.

"The 28 ingredients added to tobacco that are present at the highest levels in cigarettes occur at levels ranging from .05 percent to 9.28 percent by

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weight.
"These ingredients, along with processing aids, comprise 99 percent of the total poundage of ingredients added to tobacco in the manufacture of cigarettes, and have been extensively tested for safety.
"All remaining ingredients occur at lower levels, with many below .0001 percent, 1 part per million. Approximately 89 percent of all ingredients are approved as food additives or are generally recognized as safe by expert committees, and exposure to these ingredients is generally higher in food than through smoking.
"The authors of this report independently examined extensive published and unpublished toxicologic, metabolic and pyrolysis data on the ingredients added to cigarette tobacco and found none to be potentially toxic at levels of use.
"It is concluded that the ingredients added to tobacco in the manufacture of cigarettes by the six major United States manufacturers are not hazardous under the conditions of use."
Then if you would just scroll down through the authors. John Douhl, John Frawley, William George,
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T.A. Loomis, Robert Squire.
MR. BAKER: No counters, Your Honor.
MS. FORBES: The next document is RJR 7034. This is a report. It's titled "A Safety Assessment of Ingredients Added to Tobacco in the Manufacture of Cigarettes" by the authors just listed, John Douhl, John Frawley, William George, Ted Loomis, Robert Squire and Steven Taylor, March, 1994.
"Introduction: Flavoring ingredients have traditionally been added to tobacco, and tobacco used in cigarettes comercially manufactured in the United States has always contained such ingredients.
"Ingredients added to tobacco in the manufacture of cigarettes consist of three general types:
"Processing aids are used to reduce tar and nocotine yields to meet consumer demands as to facilitate the manufacturing process. Most processing aids are covered during manufacturing, although minute residues of a few parts per million range may remain in the tobacco.
"Casing materials and humectants are added to replace sugars lost during curing of the tobacco, to retain moisture, as a carrier for flavor and to make
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the smoke smoother and milder.
"All casings and humectants used by the United States cigarette manufacturers are foods, food products or ingredients permitted for use in food by the Food and Drug Administration.
"Flavors are added to tobacco to impart distinctive flavors and to fortify natural flavors lost during curing and processing of tobacco. They consist of natural herbs and spices, or their essential oils, as well as synthetic flavors.
"Most flavorings occur at very low levels (i.e., less than one part per million) usually as part

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of specific proprietary formulations.

"The Evaluation of Ingredients Added to Cigarette Tobacco. The authors of this report, whose qualifications are summarized in the appendix, each independently reviewed the scientific data on ingredients added to cigarette tobacco by the six major U.S. manufacturers. This report represents their consensus on the safety of the ingredients.

"The material examined was extensive and included the confidential list of the ingredients added to tobacco in the manufacture of cigarettes. The authors were also provided with summary data of all

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relevant published and unpublished toxicity tests and reports, as well as the original publications of data when requested.

"Pyrolysis and transfer rate data, Maximum use levels and annual poundage data for the ingredients were also evaluated.

"Each scientist independently visited the individual tobacco companies to examine the testing and research programs used for their ingredients. Reports and raw data from the studies were made available and were examined as necessary, and each scientist formed an independent opinion regarding the adequacy of the testing and safety of each ingredient."

Let's pick up with that last sentence.

"Toxicity Data on Ingredients Added to Cigarette Tobacco. Approximately 89 percent of all ingredients added to cigarette tobacco in the US are approved as food additives by the FDA or have been given the status Generally Recognized as Safe by the FDA or other expert committees.

"Some ingredients are highly volatile and are, thus, lost during the manufacturing process, rather than being present in the finished cigarette. Moreover, many of the ingredients are identical or

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essentially similar in composition to natural leaf tobacco components.

"The pyrolysis products of such ingredients are not expected to depart significantly from the amounts or types of components generated by a range of additive-free tobaccos or tobacco blends. Furthermore, the ingredients do not contribute measurably to tar yields.

"The authors reviewed extensive data on the ingredients added to cigarette tobacco from large numbers of published and unpublished studies. Included among these data were findings from in vitro and in vivo tests on metabolism, genotoxicity and reproduction, as well as acute, subchronic and chronic toxicity tests.

"These studies are of the same type as those used to assess the biological effects of food additives, drugs and environmental chemicals. The objectives of these studies are to determine the exposure levels at which adverse effects may occur and the nature of the adverse effects.

"In reviewing the data related to the safety of ingredients added to cigarette tobacco, emphasis was given to the major ingredients "those comprising

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99 percent of the ingredients added" close parens, since exposure to these would be expected to be highest.

"Most ingredients are present at very low levels as components of proprietary flavor formulations, and exposure, if any, would be toxicologically insignificant.

"Exposure to many of these flavor ingredients is in fact greater through the diet than it is through cigarette smoking.

"The authors also reviewed the available data on pyrolysis of the ingredients added to cigarette tobacco. Based upon such data from representative ingredients, it has been determined that most volatile ingredients to not pyrolyze in burning cigarettes, i.e. they do not decompose or chemically change as a result of heat. They are transferred intact in smoke. Thus, if there is exposure and absorption, metabolism would be similar to ingestion.

"IV, Summary and Conclusion: Ingredients are added to tobacco to aid in processing, retain moisture, add flavor and reduce tar and nicotine yields. They have always been used in comercially manufactured cigarettes in the U.S..

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"Most are present at extremely low levels. Among those that pyrolyze, the pyrolysis products are not expected to depart significantly from those of additive-free tobacco.

"It is important to recognize that the use of these ingredients has enabled manufacturers to develope cigarettes with lower tar and nicotine yields than would otherwise be available, and the primary issue in safety assessment is whether or not cigarettes are potentially hazardous as a result of the added ingredients.

"A careful analysis of the scientific data clearly indicates that this is not the case. The authors of this report independently examined extensive published and unpublished toxicological, metabolic and pyrolysis data on the ingredients added to cigarette tobacco and found none to be potentially toxic at levels of use.

"It's concluded that the ingredients added to tobacco in the manufacture of cigarettes by the six major U.S. manufacturers are not hazardous under the conditions of use."

MR. BAKER: No counters.

MS. FORBES: The next document is RJR 7035.

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It is the follow-up report, March 1998, "Safety Assessment of Ingredients Added to Tobacco in the Manufacture of Cigarettes." It is the same group of scientists. It was submitted March, 1998.

"Safety assessment of the ingredients added to tobacco includes an evaluation of both the direct transfer materials and the pyrolysis products in test systems with and without the added ingredients.

"The purpose of this report is to provide a continuing safety assessment of the ingredients added to tobacco in the manufacture of cigarettes in the United States by the four major cigarette manufacturers with greater emphasis upon chemical and biologic

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studies of pyrolysis products derived from the added ingredients.

"This report is based upon information available through 1996. A prior report prepared by the same authors in March 1994 focused on information available through 1993.

"The authors, whose qualifications are summarized in the appendix, each independently reviewed the scientific data on ingredients added to cigarette tobacco by the four major U.S. manufacturers. The material examined included confidential lists of the

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ingredients added to tobacco in the manufacture of cigarettes, summary data of all relevant published and unpublished toxicity tests and reports and the original publications of data when appropriate.

"Pyrolysis and transfer rate data, maximum use levels and annual poundage data for the ingredientss were also reviewed.

"Each scientist independently visited individual tobacco companies to examine the testing and research programs used for the ingredients. Reports and raw data from the studies were made available and were examined as necessary, and each scientist formed an independent opinion regarding the adequacy of the testing and safety of each ingredient."

Jason, let's skip on down to the second paragraph. I'm sorry, go on to the next, to the "Transfer Behavior."

"Transfer Behavior. An extensive body of research has been conducted and published concerning the composition of tobacco and cigarette smoke and the contributions of tobacco leaf components and cigarette ingredients to cigarette smoke. This has contributed to the understanding of what types of smoke constituents are produced by pyrolysis of tobacco leaf

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components and cigarette ingredients.

"Use and Exposure Levels. The level at which an ingredient is intended to be used within a cigarette or during the manufacturing process is evaluated quantitatively to assess probable exposure and extent to which the ingredient is likely to influence the composition of cigarette smoke.

It is axiomatic in toxicology that all chemicals are toxic at some dose and nontoxic at some lower dose. Therefore, the evaluation of safety of any use of any chemical must take into consideration the available toxicology data and the anticipated exposure.

"For this safety assessment, the worst case scenario has been used to calculate both types of exposures. It has been assumed that the level of use is three packs of cigarettes per day and that 20 percent of the ingredient added to each cigarette will transfer unchanged to the smoke.

"In the case of ingredients likely to pyrolyze, an assessment is made of the types of pyrolysis products.

"Chemical methods of included studies in which standard materials were added to tobacco followed by analyses of changes in smoke composition and studies

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using added radio labeled materials followed by

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determination of their fates.
"These tests have demonstrated that tobacco smoke from reference cigarettes, i.e., those without most added ingredients -- induces some characteristic and measurable changes in the blood, heart and respiratory tract tissues of test animals.
"These changes are among the best biologic markers currently available in animals to assess the potential adverse effects of smoking, and they include pathologic evidence of irritation in various parts of the respiratory tree.
"Interpretation of study results involves comparison of the incidence and severity of these or other changes induced by reference cigarettes to those induced by the same cigarettes containing one or more added ingredients, often at exaggerated inclusion rates."
Jason, let's go on down to that second paragraph. "Of these 36 ingredients" -- if you would just show the footnote which lists the 36 ingredients -- "33 have been tested in inhalation studies."
"Of the three ingredients that have not been

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tested in inhalation studies, two are inorganic and did not pyrolyze. The remaining ingredient is glutamine, a naturally occurring amino acid.
"None of these inhalation studies indicated effects of the additives over and above control effects.
"Conclusion: In preparting this report, the authors have examined extensive chemical and biologic studies on the pyrolysis of cigarette tobacco and added ingredients in use from 1993 through 1996. None of the findings demonstrated adverse effects attributable to the added ingredients.
"These findings are consistent with the known chemical and biologic characteristics of added ingredients and their levels of use. Cigarette tobacco ingredients added at the highest levels have similar or identical chemical structures to tobacco leaf componentss and, like the naturally occurring tobacco, contribute similar pyrolysis products or are volatile.
"Therefore, these highest level additives do not significantly alter the composition of tobacco smoke. The greatest number of added ingredients are flavoringss that are added to tobacco at extremely low levels.

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"Moreover, because most of the flavorings vaporize rather than pyrolyze and are lost in sidestream smoke or trapped in the filter, their levels in mainstream smoke are toxicologically insignificant.
"Processing aids are recovered or otherwise removed during manufacture, and thus their levels in mainstream smoke are also toxicologically insignificant.
"Based upon examination of the nature, levels and transfer rates from the cigarette to the smoke of added ingredients and their pyrolytic products, as well as biologic studies to specifically evaluate the safety of smoke from cigarettes with and without added ingredients, the authors conclude that the cigarette

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ingredients used by the four largest U.S. manufacturers are not harmful under the conditions of use."

MR. BAKER: No counters.

MS. FORBES: The next document is Lorillard 11992, "Testing Program for Cigarette Additives," November 18, 1980, Lorillard Research Center, Greensboro, North Carolina.

"Testing Program for Cigarette Additives. American blended cigarettes have historically contained casing materials which are additives to the natural

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tobaccos. The major components of casing materials are common to all manufacturers, consisting of sugars, humectants and certain flavorants associated with tobacco usage. However, a small fraction of the casing composition consists of flavor or fragrance substances proprietary to the manufacturer and these materials contribute flavor notes which distinguish one brand from another.

"Generally speaking, adjustments of the casing recipes are infrequent. When changes are made, they are relatively minor compared to the overall composition of the cigarette.

"The flavor of the many new low-tar cigarettes appearing on the market is contributed mainly by reformulation of a basic tobacco blends and by novel cigarette constructions made possible by improvements in paper and filter technology. Casing compositions, usually of traditionally used ingredients, are used to balance and round out the cigarette's flavor.

"The toxicology testing program presented here is for the evaluation of new additives intended for use in Lorillard's cigarette products. Additives will be tested individually, and in flavor formulations

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both separate from, and in combination with tobacco in a standard cigarette matrix.

"The scientific literature contains no specific guidance for conducting a toxicological testing program for cigarette additives.

" phases of the testing program which involve procedures for acute or chronic smoke inhalation, skin painting experiments and smoke chemistry reflect current methodologies employed in private or government contract laboratories experienced with this technology.

"The program consists of five phases and compounds under evaluation must complete the major elements of each phase before progressing to a subsequent phase. Since several activities will occur simultaneously, these are shown in vertical columns according to the group performing the activity. Ideally, the activities of all groups will be confined to a single phase at any one time.

In practice, it is expected some activities may be scheduled over two phases simultaneously. In any case, Product Development stage activities will not be permitted to progress ahead of the chemical and toxicology studies.

"The first phase of the testing program does

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not permit any product development activity. When a candidate compound has been selected, a search of the

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chemical and biological literature will be performed. Compounds deemed inappropriate candidates on the basis of published data will be eliminated from consideration immediately. The chemical structure of all remaining candidate compounds will be given a formal evaluation according to the Decision Tree procedure by two or more trained staff members to give a theoretical prediction of toxic risk.

"It is anticipated that these procedures will serve as a guide for the intelligent selection of additive materials by those responsible for such selection, and that as a result attention will be continueually directed toward only the most benign materials as tobacco additives.

"After these procedures have been completed, the candidate compound will be procured or synthesized. Sufficient analytical and physical data will be obtained to assure that the composition of the test material is accurately represented, and these results will be supported by a formal report.

"Phase I studies will be completed when each material has been tested for acute toxicity and for

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mutagenicity in the Ames test and the results reported in writing.

"Any substance showing mutagenic activity or unusual toxicity will be eliminated from further consideration.

"During phase II of the program, the chemical stability of the additive will be determined by a methodology based on considerations of the compound's chemical structure and possible interactions with other cigarette components. Unfavorable chemical stability could result in elimination of the compound from the program.

"Phase II toxicology studies will include the DNA Damage/Alkaline Elution Assay as an additional confirmation of the Ames test results. The Rabbit Eye Irritation Test will be performed to evaluate the potential of the test compound to produce injury to human mucous membranes. Adverse resulted in the above tests would eliminate the additive from further consideration.

"At Phase III of the program, the candidate additive is submitted to a battery of chemical and toxicological tests. During phase III testing, further product developments activities are permitted, but

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human exposure to the test compound for the purpose of flavor evaluation will Lee main highly restricted and at minimal levels.

"Toxicological studies to be completed during Phase III include Respiratory Effects, regarding effects on the respiratory system, the Drug Metabolizing Enzyme Induction Test regarding effects on the metabolism of other compounds by the test compound, the Immunocompetency-Humoral Antibody Resonse Test regarding the presence or absence of immunosuppressive activity of the test compound, and the Oral Acute Toxicity Test, to provide dosage data for subsequent Phase IV tests."

Let's go so down to the paragraph that begins with, "The toxicological studies" on the same page.

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"The toxicological studies to be completed during Phase III include Respiratory Effects -- I think the page is number here doubled. Let's go on. I'm sorry.

"Studies of the smoke chemistry of cigarettes containing new additives will be initiated with the same standard test cigarette used in the Phase V toxicology experiments. The additives will be applied at one or more appropriate multiples of the intended

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use level, and the resulting data compared to a control cigarette without additive.

"Analyses to be performed will include tar, nocotine, carbon monoxide, nitrogen oxides, hydrogen cyanide; a has phase profile which includes acetone, acetaldehyde, acrolein, benzene, toluene, dipentene, and limonene; an analysis for phenols," which include phenol o-, m-, and p-cresol and xylenol.

"Other analyses will be performed for specific compounds if they are reasonably expected to result in significant or measurable amounts due to the use of the additive under the test.

"Any significant changes in smoke chemistry due to inclusion of the additive will be considered in determining the suitibility of the additive for use in a commercial product.

"In Phase IV of the program a Subchronic Oral Toxicity Study on Rats will be performed regarding the potential effect of protracted feeding.

"In addition, tests for Dominant Lethal Mutations, Teratogenicity, and Reproductive Effects in Rats will be performed regarding the presence or absence of mutagenic, teratogenic and reproductive effects of compounds in mammals.

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"unfavorable biological results would halt all further product development and call for reconsideration of the particular formulation.

"During Phase V of the program, the final three toxicological studies will be performed utilizing sample and control cigarettes. The new additives would be combined in proportion to their concentration in the flavor formulation and applied to a standard test tobacco matrix containing cigarette tobaccos representative of American blends.

"Further details are presentedd in the protocols. The toxicological studies in Phase V consist of an acute cigarette smoke inhalation toxicity test regarding any contribution of toxicity by the additives, a Bioassay of Cigarette Smoke Condensates for Tumorigenic Activity on Mouse Skin in order to test the condensate; and a Chronic Cigarette Smoke Inhalation in Syrian Golden Hamsters test regarding regardinging any chronic effect of additives in smoke.

"This testing program will be applicable to all tobacco additives considered for first use after June 30, 1980."

MR. BAKER: No counters, Your Honor.

MS. FORBES: The next document is Lorillard

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10669. It's an internal Lorillard research report. Lorillard Research Center, Greensboro, Salmonella, Mammalian Microsome Mutagenicity Assay of Cigarette

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Tobacco Additives," submitted by Dan Heck and H.S. Tong.

"46 current cigarette tobacco additives were screened for mutagenic activity in the Salmonella mammalian liver microsome test system using the mutant histamine requiring Salmonella strains, TA1536 and TA100, base pair substitution mutations, and TA98, frame shift mutation. The mutagens streptocytocin and 3, 4, benzpyrene were employed as positive controls. No significant mutagenic activity was seen in the presence or absence of liver microsomes.

"Mutagenicity Assay of Cigarette Tobacco Additives. No known carcinogen should be, nor can it be legally added to food. The bioassay for carcinogens is expensive in terms of time and cost. Ames et al. have developed a Salmonella mammalian microsome assay for detecting mutagenic activity in selected compounds. Previous studies have shown that up to 90 percent of known carcinogens assayed are active as mutagens in this test.

"Hence, this report may be used as a screen

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for potential carcinogens. This report presents that test data obtained for 46 cigarette tobacco additives which are currently being used in Lorillard blends.

"No significant mutagenic activity was detected in any of them, either in the presence or absence of rat liver microsomes."

MR. BAKER: No counters.

MR. FURR: Excuse me, may I consult with Ms. Forbes for just a moment?

THE COURT: Sure.

(Brief pause.)

MR. FURR: Your Honor, if the the Court would permit us to do so, we would like to interrupt the publishing of these documents and begin putting on our next witness.

THE COURT: That would be fine. You are just deferring publication until a later time?

MR. FURR: Yes, sir.

THE COURT: That would be fine.

MR. FURR: If we could have just a moment to set up, Your Honor.

(Discussion off the record.)

THE COURT: Be seated, please. All right, Mr. Furr.

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MR. FURR: Thank you, Your Honor.

The defendants call Dr. Donald deBethizy.

THE COURT: Step forward, please, sir.

(Witness sworn.)

THE COURT: Just have a seat over here, sir. Watch your step, Dr. deBethizy.

All right, Mr. Furr.

MR. FURR: Good afternoon, laidies and gentlemen. Good afternoon, Dr. David deBethizy.

- - -

J. DONALD deBITHIZY, PhD,

a witness herein, called by the defendants, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. FURR:

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Q Would you please tell the jury your name and where you live, sir.
A My name is J. Donald deBethizy, and I live in [DELETED].
Q Would you tell the jury a little bit about your family, please.
A I have been married for 21 years. I have a daughter who is 17, a senior in high school, and a son

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who is 14 and a freshmanplan in high school.
Q You, sir, are a toxicologist; is that correct?
A Yes, I am.
Q Where do you work now, Dr. deBethizy?
A I work for a company called Targacept.
Q Would you spell that for us, please?
A T-A-R-G-A-C-E-P-T. It's named after targeted receptors.
Q What is your current job or position at Targacept?
A I am President and Chief Executive Officer.
Q How long have you been president and chief executive officer of Targacept?
A I have been president since 1977 and CEO since August, 2000.
Q Would you tell the jury a little bit about what Targacept is and the nature of it, Dr. deBethizy.
A Yes. It's an R&D pharmaceutical company that's focused on the development of therapeutics on treatment of the diseases for the nervous system; for instance, Alzheimer's, Parkinson's, attention deficit disorder, schizophrenia. And we are focused on a new class of drugs focused on a new class of targets that's

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located in the brain.
Q Was Targacept ever a subsidiary of the RJ Reynolds Tobacco Company?
A Yes, it was.
Q When was that?
A In 1977 we formed it as a wholly-owned subsidiary.
Q Is Targacet currently a subsidiary of R.J. Reynolds?
A No. We spun it out of Reynolds Tobacco in August of 2000 on the back of raising $30 million from venture capitals from the biotech community.
Q RJ. Reynolds continues to own an equity interest in the company?
A Yes, reflecting the investment they made in the basic research that founded the company, they have 43 percent interest in the company.
Q Before Targacept became a separate company, Dr. DeBethizy, who were you employed by?
A I was employed by R.J. Reynolds Tobacco Company.
Q You were asked to be a witness in this case whiled you were still an employee of R.J. Reynolds; is that correct?

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A Yes, I was.
Q What was your final title or job position at R.J. Reynolds before you left Reynolds?
A I was Vice President of Product Evaluation in

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Research and Development.
Q Vice President of Product Evaluation in Research and Development?
A Yes.
Q How long were you employed at R.J. Reynolds?
A For 15-and-a-half years. I joined the company in March of 1985.
Q And left in August?
A August of 22000 when we spun the company out.
Q When you worked at R.J. Reynolds, did you work as a toxicologist?
A Yes, I did.
Q You are the first toxicologist to testify in this case, so would you briefly tell the jury what the field of toxicology involves.
A Toxicology is the study of chemicals and the toxic impact of those chemicals on organisms or on people, and the science developed with the recognition that -- depending on the dose of a chemical, that most chemicals -- all chemicals intoxicating at some level.

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So toxicologists focus in on the toxic effects of chemicals on the body.
Q How is toxicology related to biology?
A Well, toxicology is a subset of biology. Biology is the study of organisms, of life, whether it's plant, animal, microbes, and toxicologists study the effect of chemicals on life, so as -- and the toxic effect, so as a result it's a subset of biology.
Q During the 15-and-a-half years you worked at Reynolds, you worked as a toxicologist; right?
A Yes, I did.
Q During those years, were you involved in studying and researching the toxicology of cigarettes?
A Yes, for the entire time.
Q And for the entire time were you involved in studying and researching the toxicology of cigarette smoke?
A Yes, I did.
Q And during those entire 15-and-a-half years, were you involved in performing biological tests on cigarettes and cigarette smoke?
A That's what I was hired to do.
Q Was all of that work related to R.J. Reynolds' efforts to develope less hazardous cigarette

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products?
A Yes. Again, that's why I was hired.
Q To be clear, as a toxicologist, you are a Ph.D. toxicologist and not a medical doctor; correct?
A That's correct.
Q Are you board certified as a toxicologist?
A I am board certified.
Q Do you know whether there are other toxicologists at R.J. Reynolds that are board certified toxicologists?
A They, there are 14 board certified toxicologists at Reynolds Tobacco.
Q You told us a little bit about what toxicology is, but give us a general feel for what toxicologists do in industry and what they do at R.J. Reynolds in particular.
A Well, tox -- the field of toxicology has

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expanded dramatically over the last 30 years. The Toxic Substance Control Act was passed in 1976, and that was when I was in graduate school. And it opened and advocated training more toxicologists and put them in companies and in government and in academic research labs, and with the idea that there were many, many more products coming onto the market, many more chemicals

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being involved in the development of those products.

So companies started testing the components and the products that they produced, and, toxicologists are hired throughout industry to do that kind of work.

Q Do you know whether the other tobacco companies that are defendants in this case, Philip Morris, Lorillard, Brown & Williamson, also employed toxicologists in their research and development departments?

A Yes, I do. I am familiar with that from the published literature, as well as I have colleagues that worked at Reynolds that are working at other companies now.

Q Toxicologists who used to work at Reynolds who now work at other companies?

A Yes.

Q When you left Reynolds, you were vice president of product evaluation; is that correct?

A Yes.

Q Would you tell the jury what your duties and responsibilities were in that position.

A As vice president of product evaluation, we did all of the biological testing on the products and on the components and tobacco for the tobacco company.

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At one point I had all of the chemistry and biology. I had 165 people reporting to me, and we did all the testing on products. And then, when -- just before I left, I was focused just on the biological testing, primarily on the biological testing.

Q When you left the company, Dr. deBethizy, you were responsible for all biologic testing of cigarettes at RJ Reynolds?

A Yes, all of it.

Q How long were you responsible for all the biological testing?

A I had responsibility for portions of the biologic testing for eight years and all of it for four years.

Q Okay. Dr. deBethizy, let's back up a little bit and please tell the Court and jury what your educational background is after high school.

A Well, after high school, I went to the University of Maryland in 1968, got a degree in biology. Then I went to Utah State. I was fortunate to get into that program. That was one of the few programs in toxicology at that time, environmental toxicology.

And I got a Master's degree first in

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environmental toxicology. Then I went on and got a Ph.D. in toxicology. Then when you're in the research field and interested in doing research as a career, you go on to postdoctoral fellowship.

So after graduate school, I went into the

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Chemical Institute of Research Triangle Park in Triangle Park, North Carolina, and did two more years' training in somebody else's laboratory before I moved on to my first employment in industry.

Q You got your Master's and Ph.D. in toxicolog at Utah State?

A Yes, I did.

Q Describe for the jury the nature of the scientific disciplines that toxicologists are trained in.

A Well, we have to have very broad training because toxicology involves a lot of different disciplines, so you take courses in chemistry, in biology, in toxicology, in pharmacology, material science, physics, histopathology, veterinary medicine.

Q Did any of your work for your Ph.D. involve the study of cancer?

A Yes.

Q What was the nature of that work?

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A My Ph.D. dissertation was on the influence of dietary fiber on colon cancer, so I worked with animal models related to developing colon cancer and the mechanisms -- the -- since I was in Utah, our laboratory was funded to study the influence of dietary fiber because the Utah population, the Mormons in Utah had a low incidence of colon cancer compared to the national population.

And the hypothesis at the time, was it was because the Mormons canned a lot of fruits and vegetables, and they ate a lot of fruits and vegetables and, therefore, they were somehow protected, even though they had a high fat and meat consumption.

Q After you got your Ph.D. from Utah State, you did a fellowship in toxicology?

A Yes, I did.

Q What laboratory did you do that in?

A I did that at at the Chemical Industries Institute of Toxicology. It was in Dr. Doug Rickert's laboratory.

Q What are the purposes of a postdoctoral fellowship in the field of toxicology?

A When you focus in on your career as doing research -- you get research training during your

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Ph.D., and you are exposed to a lot of the techniques and fundamental methods in doing research.

It's important to then move on and study under another person who has a different approach. And I did that at one of the best places for doing postdoctoral research in toxicology.

Q Does the R.J. Reynolds Tobacco Company have a postdoctoral fellowship program in toxicology in which it participates in the training of postdoctoral fellows?

A Yes, we do. In fact, my experience as a postdoc was an excellent experience, and I wanted to recreate that at Reynolds. In fact, I was approached by Duke University to keep that program at Reynolds because we had a -- we had very good facilities.

We had excellent equipment. We had very good applied scientists, industry scientists, and they thought it would be an excellent place for people to

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get additional training like I had gotten at the Chemical Industries Institute of Toxicology.

So we worked with Duke to develope a program. I was called the Leon Golburg Memorial Fellowship Program, and we had many postdocs come and work in our laboratories and publish their research that they

4995

conducted in our laboratories.

Q I meant to ask you, during your postdoctoral fellowship, did you do research on cancer?

A Yes, I did.

Q What did you do?

A I was working on a problem. In the dye industry -- people working in the dye industry were getting a variety of different cancers, and people were concerned that it was related to these precursors to the dyes called nitrotoluenes.

And there had been an animal study at CIIT, where I was doing my postdoc, that showed that rats developed liver tumors, but only male rats, and female rats didn't.

And the question I was working on was: Was that relevant to human cancer. And so we worked on the metabolism and basic mechanism of that tumor formation.

Q After you finished your postdoctorate fellowship, you had to get a real job?

A Had to get a real job.

Q Where did you go?

A I went to Rohm & Has Chemical Company, which is R O H M and H A S, located in Philadelphia. And they have their research labs in Springhouse,

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Pennsylvania.

And they -- their main products are Plexiglass and the acrylic polymers that go into latex paint, among other things, but about 60 percent of their business was made from these plastics.

And a study had just been published showing that the monomers, or the small chemicals that made these plastics, had caused stomach tumors in the rats exposed to acrylic acids and ethyl acrylate.

So I was hired to study that mechanism of toxicity or carcinogenicity and see if there was -- if those findings were relevant to human cancer or not.

Q You worked as a toxicologist, I take it --

A Yes.

Q -- at Rohm & Has?

A Yes.

Q Your work included cancer?

A Yes.

Q And did that involve inhalation studies?

A Yes.

Q How long were you at Rohm & Has?

A I was there about two years.

Q What was your next job?

A I was hired by R.J. Reynolds Tobacco Company

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in 1985.

Q What was your position when you were hired in Reynolds?

A I was hired as a Senior Toxicologist.

Q When you were hired into Reynolds, did Reynolds already have toxicologists and biologists

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working in the Research and Development Department?
A Yes, they did.
Q Do you know whether the toxicologists and biologists that were working in the research and development were already doing biologic testing of cigarettes when you arrived?
A Yes, they were.
Q Did that include testing of commercial cigarettes?
A Yes, it did.
Q And that was in-house testing; is that correct?
A Yes. It was done on the premises at Reynolds Tobacco.
Q Dr. deBethizy, why did you accept the job at R.J. Reynolds?
A Well, it was fantastic opportunity. We -- I had gone from my postdoc at CIIT to Rohm & Has because

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the top toxicologist in the world was in charge of toxicology there, and he was the editor of the major journal that we published our work in, called "Toxology and Applied Pharmacology."
He was hired by Reynolds to expand their toxicology capability and to develope that capability to apply it to reduced-risk products and I had this fundamental interest in working on those kinds of problems.
That's why I had gone to work for Rohm & Has and for him. He asked me to go down there with him with two other people from Rohm & Has. So the four of us went down there to expand this capability at Reynolds.
Q You were at Reynolds for 15-and-a-half years?
A Yes, I was.
Q While you were at Reynolds, were you and the other scientists in the Research and Development Department committed to reduce the health risk of cigarette smoking?
A Yes, that's why we went there.
Q I want to trace your career a little bit. Your first position was as a Senior R&D Toxicologist; is that correct?

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A Yes.
Q What type of work did you do in that position?
A Since I was more mechanistically oriented, I did work on the biochemistry and the biology of disease, I was asked to study nicotine metabolism, how was nicotine changed in the body, and nicotine uptake as it relates to reduced-risk products because, as they -- as we dramatically modified the cigarette smoke, the question that people had was: Could you alter the uptake and metabolism of nicotine and actually intoxicate people because they weren't getting cigarette smoking the same way they were from conventional cigarettes.
Q Why was R.J. Reynolds studying nicotine metabolism uptake?
A They were studying that for two reasons: One is as a biomarker of smoke exposure, as well as making sure that the modifications that we were making to the

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tobacco product did not alter the uptake of nicotine and make nicotine more toxic to the smoker.

Q Okay. Dr. DeBethizy, I want you to assume that, in this lawsuit, the plaintiffs' counsel has alleged that the research and development work done at

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the companies, including R.J. Reynolds, on nicotine had nothing to do with attempting to make safer cigarettes. Do you understand?

A I understand.

Q Is that an accurate statement, Dr. deBethizy?

A Absolutely not. That's why I was hired. That's the work that I did.

Q In fact, was your research on nicotine metabolism and update related to R.J. Reynolds' efforts to make a safer cigarette?

A Directly related. In fact, I published that work in scientific journals.

Q Explain how that work was related to trying to make a safer cigarette.

A Well, as I said, when you are modifying the tobacco product as much as we were, realized that we had reached the limits of some the technologies we had with tobacco burning cigarettes, so the scientists and engineers at Reynolds had developed a completely different kind of cigarette, a cigarette that heated tobacco rather than burning tobacco, and that cigarette was primarily glycerine and water.

The smoke that you saw was primarily glycerine and water with tobacco flavors that came over

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from the heated tobacco. So the question -- the hypothesis, was: If you change the smoke so radically and the composition of the smoke going into the body, could it alter the way that nicotine was either absorbed in the lungs, into the bloodstream, distributed throughout the body, metabolized by the liver and other organs and then excreted from the body.

So essentially the appearance into the blood and the disappearance was a question that everybody had, and that was where my expertise was, so I was asked to work on that.

And we did that work both in animals and in people, in smokers.

Q Now, you referenced cigarettes that heat instead of burn tobacco in that answer. The jury has heard a little bit about this. I intend to talk with you at some length about it.

Are you referring to cigarettes known as the Premiere and Eclipse cigarette?

A Yep.

Q I want to jump forward in time to 1992 and ask you whether you received a promotion in 1992 and what your new title was?

A I acquired more responsibilities and became

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Director of Biological Research, and as Director of Biological Research, the molecular toxicology -- I kept the same responsibilities that I had, where I was doing the nicotine metabolism and pharmacokinetics work, the work on drug metabolizing enzymes in the liver, the work that I was doing on drug metabolizing enzymes in the liver and how they're affected by cigarette smoke.

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And we also -- I also had the group of the -- the role of nicotine in tobacco use.
Q Your title was Director of Biologic Research; correct?
A Yes.
Q Did you get a promotion in 1994?
A I did.
Q What did your title become?
A It became Director of Product Evaluation.
Q And your new responsibilitiess were what?
A It included all of the product evaluation, which included the chemistry testing of everything from tobacco, the raw materials, the manufactured product, the whole product, commercial brands.
So we did all the chemical testing, and that's when my responsibility went up to about 165 people, a large percentage of R&D and all of the --

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still all of the molecular biology, the molecular toxicology and the role of nicotine in tobacco use.
Q And you are talking about chemistry testing performed in-house at Reynolds on cigarettes and cigarette smoke?
A Yes.
Q Your next position, I guess, was the Vice President of Product Evaluation? Is that what you told us earlier?
A Yes. In '97, I became Vice President of Product Evaluation, and we reorganized somewhat, and the chemistry moved over onto another person, and I was -- I took on all of the biology. So I took on the animal testing, as well.
Q In that position, were you responsible for all toxicological testing and biological testing at Reynolds Research and Development Department?
A Yes, all of it.
Q Dr. deBethizy, have you authored or coauthored scientific publications based on a your work at Reynolds?
A Yes, I have.
Q Approximately how many?
A I have 31 peer-reviewed manuscripts.

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Q What were the nature of those studies or in what field did you publish in?
A I published in cancer research, I published in mechanisms of cancer development, and I also published in reduced-risk cigarette development, as well as nicotine metabolisms and pharmacokinetics.
Q What does pharmacokinetics mean?
A Parmacokinetics the field where you study the appearance of something in the blood, and the disappearance. So you are measuring mathematically the rate at which a drug or chemical appears in the blood and the rate at which it's eliminated from the body.
Q Were these publications based on the research you conducted while employed by R.J. Reynolds?
A Yes.
Q In addition to your publications, did you also give lectures and present papers at scientific meetings on the research that you had conducted at R.J. Reynolds?
A Yes, we were very active at presenting our

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work at international scientific meetings.
Q In the 15 plus years that you were at Reynolds, did the other scientists at R.J. Reynolds publish the results of their research in peer-reviewed

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literature and present that information in papers and at scientific meetings?
A Yes. In fact, over -- since 1980 there have been over 1,600 publications or presentations by Reynolds scientists.
Q And does that type of research and publication at R.J. Reynolds continue today?
A Yes, it does.
Q Now, during this time period between, say, 1980 and today, are you aware of any other private or governmental organization or entity that has published more about the chemistry or toxicology of tobacco smoke than the scientists at R.J. Reynolds?
A I don't think so. Not -- when I have looked at that, Reynolds has had the largest amount of publications and presentations.
Q The jury has heard about being a peer reviewer in the process of publishing scientific results in journals.
Have you been a peer reviewer for publications?
A Yes, I have.
Q What type of publications?
A Toxicology publications, Chemical Research in

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Toxicology. I have reviewed papers for Toxicology and Applied Pharmacology. I have reviewed papers for Fundamental and Applied Toxicology and Food And Chemical toxicology.
Q Did some of your other colleagues in the Research and Development Department also serve as peer reviewers for different journals?
A Yes, they have. And they still do today.
Q Dr. deBethizy, have you served on governmental panels related to cigarette modification and how to make cigarettes potentially less hazardous or safer?
A Yes, I have.
Q Will you describe that experience form the jury, please.
A I was invited to attend two government panels in Canada. Health Canada, which is sort of like the FDA and The health and Human Services here in this country, but in Canada, had been mandated to develope guidelines for developing less hazardous cigarettes.
So I was asked, along with one of my colleagues, Dave Townsend from Reynolds, to attend a meeting with all of the experts in the field. And we represented the industry and our company, and we

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presented data on cigarette design, the efforts over the years to reduce tar, as well as our efforts to develope Premiere and Eclipse.
Q You attended, and you mentioned that Dave Townsend attended, also?
A Yes.
Q Tell the jury who Dr. Townsend is.
A Dr. Townsend is now currently the executive

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vice president of research and development for Reynolds Tobacco.

Q Were there scientists from any of the other tobacco companies that were also invited to attend those Health Canada meetings?

A Yes. The first one there was a representative from Imperial Tobacco. And at the second one we were at, there was a representative from Philip Morris, Richad Chapman.

Q I want to be clear about this: What was the purpose of these meetings?

A These meetings were to assemble the people most knowledgable about developing products to reduce risk, to answer the question of: Is it possible. We presented data to describe that it is possible; that we had made significant progress in that regard, and then

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how would you recognize one if you had one.

And there's an effort that's still ongoing today to build consensus around what does a less hazardous cigarette look like. So we had done a considerable amount of work, assembled a lot of tests.

So they wanted to hear about the battery of tests that we use. They wanted to see the results of those tests. Then we had very frank and open discussions about what's the best way to do that.

Q If I understand your testimony correctly, one of the issues and one of the difficult issues is how to know a safer cigarette when you see one. Is that fair?

A Yes.

Q Because, as I understand your testimony, there is no consensus of the sets of tests or test that should be used to determine whether a new cigarette is likely to be safer; is that correct?

A That's correct.

Q You told us about Health Canada. Have you also been involved in meetings with the National Academy of Sciences?

A Yes, I have.

Q Would you tell jury about those meetings?

A Well, fairly recently, in the last couple of

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years, the FDA asked the National Academy of Sciences, and more specifically the Institute of Medicine arm of the National Academy of Sciences, to take a look at this question: Can less hazardous cigarettes be developed and what are the kinds of tests that could be done to persuade someone that you had reduced the risk associated with smoking by reducing the toxicity of a cigarette product.

So we put together our company's efforts, put together a recommendation on what a testing paradigm could look like, because we had been doing it for many years and had added to it over many years.

And we were asked to present -- we were invited, we went and presented, along with other tobacco companies, along with some pharmaceutical companies, along with some government scientists, and we presented two experts, scientific experts, that had been assembled, and a report came out on that effort.

Q Would it be clear, Dr. deBethizy, for the 15-and-a-half years you were at Reynolds, your job was the biologic testing of cigarettes and cigarette smoke?

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A Yes, it was.
Q During those years, you were involved in trying to identify the tests that should be used to
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determine whether progress was being made in terms of trying to develope a less hazardous cigarette; is that correct?
A Yes.
MR. FURR: Your Honor, at this time, if it please the Court, I would ask that Dr. David deBithizy be recognized as an expert in the areas of biology and toxicology, the biological testing of cigarettes and testing methods for evaluating new cigarette designs for potential risk reduction.
THE COURT: I didn't get all that. I got biology and toxicology.
MR. FURR: The biological --
THE COURT: Biological testing of cigarettes?
MR. FURR: Yes, sir. And testing methods for evaluating new cigarette designs for potential risk reduction.
MR. SEGAL: I have no objection, and I have no voir dire at this time.
THE COURT: All right. This witness will be considered as an expert witness capable of giving opinions and conclusions within the disciplines of biology and toxicology and as those disciplines may have an impact on the biological testing of cigarettes
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and the testing methods of evaluating cigarettes for potential something.
MR. FURR: Risk reduction.
THE COURT: Risk reduction. That's what it is.
MR. FURR: Thank you, Your Honor.
BY MR. FURR:
Q Dr. deBethizy, I am going to ask you during the course of your examination to express some opinions about those issues, do you understand, as opposed to fact testimony?
A Yes.
Q When you express those opinions, we need you to commit to the Court and jury that you will express only opinions that you hold to a reasonable degree of scientific certainty.
A I will do that.
Q I want to ask you first, Dr. deBethizy, a few sort of background opinions for your testimony.
As a toxicologist, I want to know whether you have an opinion as to whether smoking cigarettes has been shown to cause lung cancer and emphysema?
A Yes, I do.
Q What's your opinion, sir?
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A My opinion is that smoking can cause lung cancer, emphysema and heart disease.
Q Now, you say "can cause," sir. By saying "can cause," do you mean to say anything other than does cause?
A Well, the reason I say "can cause" is that I recognize from the epidemiology that about somewhere between 5 and 10 percent of smokers get lung cancer and not -- so that means 90 to 95 percent of smokers don't

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get lung cancer. So not everybody that smokes get lung cancer. So my view is it that can cause; it just doesn't cause in everyone.

Q I take it that, obviously, the same would be true for the relationship between cigarette smoking and emphysema; is that correct?

A Yes.

Q Dr. deBethizy, I want you to listen closely, sir, because I want to read you a statement and ask you some questions about it. Okay.

The statement is as follows. It's a statement I got from R.J. Reynolds' web site: Reynolds manufactures products that have significant and inherent health risks for a number of serious diseases and may contribute to causing these diseases in some

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individuals. Got that?

A Yes.

Q Do you know, sir, is that R.J. Reynolds' position on the relationship between cigarettes and health?

A Yes, it is.

Q Sir, in your opinion, is that a scientifically accurate position?

A Yes, it is.

Q I want to talk to you about why I've asked you to come here, Dr. deBethizy. I want to tell you that, during opening statements in this case, some very serious claims were made, and I want to tell you what those claims were and ask you whether you can address those claims. Okay.

I want you to assume that Mr. Segal told the jury that Reynolds R&D spent all of its research money studying nicotine and flavors instead of trying to develope and design cigarette products to make them safer. Do you understand that?

A Yes.

Q Is that an allegation or claim that you can address, Dr. deBethizyDr. deBethizy?

A I can address that directly.

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Q Do you believe that statement is inaccurate?

A It's not an accurate statement.

Q I want you to also, sir, assume that Mr. Segal told this jury that Reynolds did not do in-house biologic safety research on its cigarettes. Do you have that one?

A I have that one.

Q Is is that a statement you can address?

A I can address that one.

Q Is that an accurate statement?

A It's not -- I was hired to do that work in 1985, and it was going on when I got there, so I know it's not accurate.

Q Is that, in fact, what you spent 15-and-a-half years doing?

A That's correct.

Q It was being conducted when you got there; is that correct?

A Yes.

Q I want you to also assume that Mr. Segal told this jury that R.J. Reynolds and the other companies did not research how to decrease the level of harmful

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chemicals in smoke.
Do you have that one?

A Yes.
Q Can you address that claim, sir?
A I can.
Q Is that an accurate claim?
A No, absolutely not.
Q Dr. deBethizy, did you develope a demonstrative that will be helpful to you in explaining to the jury the manner in which R.J. Reynolds' Research and Development Department is organized as it relates to the topics that you are here to discuss?
A Yes.
MR. FURR: Your Honor, may the witness step down?
THE COURT: Sure.
MR. FURR: This would be under Tab 20 -- excuse me, not Tab 20. It's this one.
THE COURT: Are you talking to me?
MR. FURR: Yes, Your Honor. I was letting you know what we're looking at, because it's in your notebook up there.
THE COURT: What notebook?
MR. FURR: The notebook that I meant to give you. Your Honor, may I approach? I have a notebook here that has smaller copies of Dr. deBethizy's exhibits.
THE COURT: That's fine. Thank you very much.
MR. FURR: We all know the Judge is listening.
BY MR. FURR:
Q Dr. deBethizy, using that exhibit, would you explain to the jury how the Research and Development Department is organized.
Let me stop you first. You referenced Dr. Townsend earlier. What is Dr. Townsend's current position?
A He's Executive Vice President of Research and Development.
Q How many employees are at R.J. Reynolds right now?
A There are 400 employees.
Q How many of them have advanced degrees?
A 120 have either master's degree or Ph.D., 70 Ph.D. scientists.
Q Let me ask you to briefly walk through the way in which Reynolds is organized and explain to the jury the roles of -- are these called divisions?
A Yes.

Q -- the different divisions of research and development.
A As you can see, there are 400 employees, and they are spread across these six groups, actually called groups. And it goes from the R&D engineering and agrobusiness -- so this is the end where the processes begin in terms of getting the tobacco from farmers, interacting with the tobacco and developing the processes for handling and making cigarettes.
That's an important component, because you

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have to make sure that whatever you design in the laboratory is transferable to the manufacturing facility. So these are a lot of engineers in this group.

In the brand development area, this is an important area because this area interacts with the smokers. So they understand what the smokers wants are and consumer understanding. They monitor the current brands that are marketed in the market. They interface with the the newly developing brands. They also monitor the paper and filter materials and the flavors, and they also have involvement with the leaf and agricultural sciences; for instance, the entomologist that work in the company to monitor the pesticide use

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on tobacco.

From there we go to the product and process development. So we have talked about the pilot plant. We have talked about the brands and interaction with consumers. But we also have a group that developes new products. These are very createtive people that are involved in, if you want to make this kind of a change in the product, what's the ramification of that.

So all those developments over many years, in terms of taking tar down, changing the filters, changing the paper, changing the tobacco, were all done in this product and process development.

Cigarette design research is there. In fact, when I joined the company in '85, they were teaching a course called cigarette design, which I took, which was -- which I had no idea that it was as sophisiticated as it was when I joined the company.

Then once you have the product and it's either an existing product on the market or it's a developed product, then the product chemistry group does the analysis of either the components, the tobacco or the smoke from the product.

The product evaluation group has the biological testing, genetic toxicology, cellar

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toxicology, smoking and health issues.

Then there's --

Q Let me stop you there for just a minute.

You have Dave Doolittle listed as the vice president of product evaluation?

A Yes.

Q Would you tell the jury a little about who Dr. Doolittle is.

A Dr. Doolittle is a toxicologist. Yes, he does have that name, and doesn't talk to the animals.

But he and I have had three jobs together, actually. He and I did postdocs together at CIIT. We worked at Rohm & Has together. He was one of the scientists that came down. He's a very prominent research toxicologist, has published over 100 papers and he has continued to look at and adopt methods to tobacco that have been used either in academic research or in other industries.

So he is a very prominent research scientist and now vice president of this area.

Q Let me be clear, Dr. deBethizy. Dr. Doolittle's job is the biologic testing of cigarettes and cigarette smoke?

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A Yes. That has been his job since he was
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hired in 1985, and he is the world's leader on doing biologic testing on tobacco smoke.
Regulatory toxicology is headed by Arnold Mossberg, who is vice president of regulatory toxicology. Now, this group is the administrator of our Product Stewardship Program, where we have toxicologists.
A large number of our Board certified toxicologists are in this group. They interface all the way down this whole line of interaction with the product. So they will actually have people that interact with the engineering group as they are developing the process, to make sure that the materials they are using, that come in contact with tobacco, do not unintentionally add any toxic materials into the raw material; like, if you had a polyethylene belt on a conveyer, that you wouldn't have any pieces coming off into the tobacco.
They also work very closely with the decisions and designs that the grants development is putting in, from a paper change or a filter change. So they will be enter acting all the way. They know what the current state and federal relation regulations are. They have all of the data in records, so they can
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access all of the data bases, and they do this for product stewardship.
They also look at regulatory compliance so that they know what the laws are, they know what we have to comply with, both from OSHA standards, schedules product standards.
Q Dr. deBethizy, could you tell the jury a little bit about Dr. Mossberg.
A Yes. Dr. Mossberg came to us from Batelle Laboratories where he was an associate director of toxicology there. He is a biomedical engineer with a Ph.D. He is a Board certified toxicologist, and has -- is very knowledgable in animal testing associated with -- and he did animal testing before he came to Reynolds tobacco, and he was hired to set up the inhalation facilities that we put in-house starting in 1985.
Q Dr. Mossberg's job is biological testing of cigarettes and cigarette smoke?
A That's what he has done the entire time he has been there.
Q Okay. Let me ask you to take your seat, sir.
Dr. deBethizy my notebook fiasco got me a little off track. Have you prepared a demonstrative
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that would help you organize for the jury the efforts that R.J. Reynolds has made in its research and development department with respect to developing safer cigarettes and making sure that its current products don't become any more risky?
A Yes, I have.
Q Can I have Demonstrative No. 20, please.
Would you explain these categories of work to the jury, please.
A Yes. I have already mentioned these, and I think it's good to have something to look at. Product

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stewardship is the program that we have in place to interact with all of those groups that you saw, to make sure that the product that we're producing is not any more toxic after a particular change that we might make.

So these are commercial cigarettes that we have on the market, and we have a program in place to make sure that whatever flavor, whatever change, whatever paper change, does not add to the inherent toxicity that's already associated with that particular product.

We also have been very actively involved, for many, many years, for decades, in reducing the risk of

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the product. And so the -- RJR Research and Development works -- I have already mentioned Premiere and Eclipse as two examples of those efforts, but there will be many more effortss that I will be describing.

I also will be talking to you about the biologic testing of cigarettes that we have conducted since I have been there in '85, and it was ongoing when I joined the company in '85.

Q Dr. deBethizy, let me ask you, you got there in '85; right?

A Yes.

Q Since that time have, you personally been involved in all these aspects of research and development at R.J. Reynolds?

A Yes, I have.

Q When you arrived there, was the philosophy underlying this work already in place and driving the work that was being done at R.J. Reynolds?

A Yes, it was. In fact, it had been there for some time and I was hired in an effort to expand the effort to expand the ability to do additional testing.

Q I want to walk through these -- each of these during the rest of your examination. I want to start with this product stewardship.

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Would you tell the jury what the goals are of the Product Stewardship Program at R.J. Reynolds.

A I have already touched on that a little bit. I'll just to go back to that and expand on it.

Product stewardship is an effort to make sure that whatever changes that we intend to make to the product -- remember I told you that the brands group would interact with the product and they may want to change the flavor, they may want to change the level of menthol, the type of paper that we are using.

There were a lot of changes over time that were made to reduce tar. The Product Stewardship Program is in place to make sure that when those scientists and engineers and product developers want to make a change, that we as toxicologists have reviewed those changes, we have recommended a testing program, that could be both physical testing, chemical testing or biologic testing, and that we have the data and that we are convinced that whatever change that they are making doesn't alter the inherent toxicity, and, in fact, if the intention is to lower the toxicity to reduce the risk, that it's done that.

Q If I understand your testimony, sir, this product stewardship program applies to both intended

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and unintended changes that are made in the product; is that correct?
A That's correct.
Q Did you prepare a demonstrative, sir, that would help you explain to the jury what we mean when we are talking about the unintended changes that can occur in the product?
A Yes, I have.
Q Homefully you will be able to see this from up there.
Q Can you see that, Dr. deBethizy?
A Yes, I can.
Q Okay. Let me just walk through each step of this for you.
When we talk about stewardship and unintended changes as it relates to leaf, what does Reynolds do?
A As you can image, your raw material is -- comes right out of a field from farmers. It's tobacco leaf, and it's harvested.
One of the basic things that we have to do is to make sure that that agricultural product is clean, that there aren't foreign materials that are somehow captured in among the leaves as they process those and bring them to our warehouses, and so just looking for
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foreign material and contamination of leaf is an important product stewardship efforts
In addition, there are pesticides that are approved for use, and there are many that have been used, so it's important to monitor the amount of pesticide residue on the leaf. It's important to make sure that ones that are not approved are not there and to make sure that the ones that are approved are not at levels that are unacceptably high.
Q Is that also done for fertilizer residues?
A Yes, it is.
Q With respect to this pesticide residue issue, where does Reynolds get the standards by which it tests the leaf to determine the permissible levels of pesticide residue?
A The US Department of Agriculture is responsible for that.
Q Are those the standards that Reynolds applies?
A Yes, they are.
Q Does Reynolds also have in place educational programs that it uses to try to educate farmers about the appropriate amount of pesticide and fertilizers to use while the tobacco is being grown?
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A Yes, we do. It's important with agricultural products that farmers understand which pesticides are currently approved and at what levels. There is a natural tendency among farmers to say, well, if this much works, then this much more might work this much better, and that's not the case with pesticides.
It's very important that they use them according to certain standards so that the residue levels that are left on the tobacco leaf are at toxicologically safe levels. So those are -- it's very closely monitored.
Q Let's move to the next step. How does did

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Product Stewardship Program apply to this screening step that you have illustrated for us?

A As I indicated, you have the whole tobacco leaf coming in in these tobacco bundles. You make sure you visually inspect that tobacco. Once that tobacco starts to move into the processing where the stem is taken out of the leaf, the leaf is cut up, you have an opportunity, as the tobacco is moving down conveyer belts and is being shaken into different particle sizes, different-size components of the leaf, to look for foreign material.

So we have, for decades, had people

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monitoring that raw material, and we have had -- recently Reynolds has put in very sophisticated monitoring devices for being able to watch that tobacco and make sure that no foreign material gets into the tobacco stream.

Q How does the Product Stewardship Program apply to the manufacturing process?

A Well, as you know, in manufacturing there's a lot of different manipulations that are going to occur to any raw material, so there are liquids added to tobacco. There are dry materials being moved around.

Tobacco is stored. It has moisture in it. You have to monitor the tobacco for pesticides that are used to control bugs in the factory. You have to monitor the tobacco for any unintended material or debris that may fall into the tobacco.

There's consideration given to the ceiling material. There's consideration given to the kinds of belts, the kinds of oils that are used on the machines. Everything has to be food grade. Everything is gone over by toxicologists in this Product Stewardship Program.

Q Is it fair to say that virtually anything that touches the tobacco is evaluated to make sure that

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it's not going to somehow increase the risk of smoking?

A Yes. And if there's any suspicion that something has happened, samples of that tobacco are taken, they are taken and tested using chemical analyses. And over the years our chemical analysis group has gotten very good in recognizing if something has contaminated the tobacco.

Q The final step on this chart with respect to unintended changes that you want to guard against with respect to product stewardship is titled "Cigarettes in the Market."

What does that mean?

A Once you manufacture cigarettes and you package them and you ship them out to stores, they are outside of your control. So there's also a program where we actually go out on the market, buy our own brands, we buy competitors' brands, and we look at those products.

So we evaluate those products for physical quality, whether there has been any alteration of those products. We actually do chemical analysis, and we also do biological analysis. And we do that work quarterly.

Q What types of biological analyses are done?

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A We use -- a short-term screen called an Ames assay is the workhorse for that analysis.
Q The jury has heard a lot about that, but since you are the first toxicologist, would you tell the jury what the Ames assay is and what it shows.
A Yes. The Ames assay was developed by Bruce Ames at the Univeristy of California at Berkeley.
As I told you earlier, toxicology was really starting to develope in the seventies. There was a -- Toxic Substance Control Act passed, and Bruce Ames recognized the need for a rapid, relevant, short-term defendant for toxicity.
So he developed a bacterial assay, so you actually have bacteria that are cultured. They are Salmonella bacteria, and they are engineered in a way that makes them susceptible to toxicity. And you use that assay to be able to rapidly identify whether something is interacting with the DNA of the Salmonella bacteria.
So it's a mutagenic assay. Mutagens are compounds that damage DNA that could lead to cancer. So it's thought to be a first screen for compounds that would have the potential to lead to cancer.
Q We are going to talk a lot about this, but is

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it fair to say that in the past 25 years or so that Reynolds has done thousands and thousands of Ames assays and research and development on cigarettes and cigarette smoke?
A Thousands.
Q The jury saw and heard this afternoon excerpts from two manuscripts or published articles from Reynolds' scientists: One by Steele and one by -- I think it's Chepiga?
A Chepiga.
Q How do those papers relate to, if they do, this product stewardship function of monitoring cigarettes already in the market?
A That's a very extensive market survey that we do periodically. We did one in the mid-'90s that was published in 1994, and we did one in 1998, that we published in 1998.
And it's a survey of about 70 percent of the marketed brands for Ames activity. So we purchase the cigarettes, we bring them in, we smoke them, we do -- we capture the smoke. We then put it into the bacterial cellular assay, and we actually measure the mutatinos in those cells, and we count them up and we express that on the amount of tar and we express it per

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cigarette. And then we publish that for all those brands.
What that does for us is it gives us a benchmark of where the market is, where is individual tar categories -- they are are full flavor tar cigarettes, ultra low-tar cigarettes. So we have an idea where our own brands are and where the competitors brands are.
It's very important in product stewardship to have a benchmark. All of our studies are done comparatively so when we are developing a change in a cigarette, whether it's a flavor change or a paper change, we have a standard, and that standard is where

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the market is and we can confirm whether that change increased the mutagenicity or the biological activity of the cigarette smoke, and if it does, we would not use that change.

Q I want to be clear. Now, the Steele and Chepiga studies involved biologic testing of cigarettes; correct?

A Yes.

Q Of commercial brands; is that correct?

A Yes, about 70 percent of the commercial brands.

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Q That was done in-house at Reynolds; is that correct?

A Yes, it was.

Q Was that done in a comparative fashion where the results of for one commercial brand were compared to the results of another commercial brands?

A Yes, they were.

Q When that was shown to the jury this afternoon, the data was organized under a column entitled -- I think it was revertants per milligram or revertants per cigarette.

What does that mean?

A When Bruce Ames developed the Ames assay -- the bacteria reverts, and it's the way you can tell whether the bacteria have been mutated.

So if the DNA actually changes, it reverts back to its ability to grow under certain conditions.

And so we count the number of colonies of bacteria that actually are able to grow, and therefore we get an idea as to whether there has been a significant amount of mutations in the DNA.

And so that data is expressed as revertants per milligram of tar or cigarette smoke.

And we also -- since the cigarettes out there

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on the market yield varying amounts of tar, we then also suppress the data as the amount of total revertants, or mutagenicity, per cigarette.

Q The Steele and Chepiga studies included work that was performed on cigarettes from Reynolds, Philip Morris, Brown & Williamson and Lorillard; is that correct?

A Yes.

Q Based upon your review of the documents, while we all know those two studies were published, did Reynolds do similar-type surveys in 1980 and 1990?

A Yes, they did. Before I joined the company, Chin Lee had been -- had set the assay up at Reynolds soon after Bruce Ames developed it, and adopted it to cigarette smoke condensate and the use of monitoring brands, and he had run the assay on a large number of commercial brands at that time.

Q Who is Chin Lee?

A Chin Lee is a scientist who worked for many years at Reynolds tobacco in research and development.

Q When did Bruce Ames develope and publish so that everyone else could use this Ames assay?

A Bruce published the assay in the midseventies, did his work and published in 1974.

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And Chin Lee was working to develope that

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assay at Reynolds Tobacco around 1976, I would say. By 1978 he was producing very reliable and validated data for comparing brands.

Q You told us what the Ames assay is. Am I correct, then, that by the late seventies, R.J. Reynolds was doing in-house biological, comparative testing on commercial cigarette products using the Ames assay?

A Yes, they were.

Q And even at that time, were hundreds of hundreds of tests being done?

A Yes, they were.

Q Tell the jury, if you would, sir, what the role is of -- they have heard some about this -- what reference cigarettes are used for in the biologic testing of cigarettes.

A The University of Kentucky recognized that -- and they had done a lot of tobacco research. They -- we all recognized that there was a need for reference cigarettes. So these cigarettes were produced, they were reproducible, and they were done with a particular formulation and blending so that they would -- and they would be available to all tobacco researchers, so that

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if anybody wanted to reproduce our work, all they had to do was run the Kentucky reference cigarette for the particular tar category that they were researching, and they should get a result very similar to the result that we got in our laboratories.

So it's used as a way of comparing work from laboratory to another. It's very common to have reference standards or positive controls in toxicology, in any industrial application of toxicology.

Q I take it -- is there something wrong with using reference cigarettes in your experiments?

A No. Reference cigarettes are essential for people being able to reproduce our work. So when it's appropriate, we run reference cigarettes.

When we want to look at a change in a particular commercial brand, we will then use the commercial brand, and we look at the commercial brand with or without the change. So we run both.

It just depends on the design and the experiment. For a lot of the reduced-risk work that we did, we first verified that the Kentucky cigarettes were representative of the market.

In fact, the Steele and Chepiga papers, two of the primary objectives of those studies were to see

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if the 1R4F reference cigarette, which is the full-flavored low-tar cigarette, was comparable to cigarettes on the market, and a lot of the body of work done with the Ames assay showed that.

And then our subsequent work showed that the 1R5F, which is a 2 miligram product, an ultra low tar product, was also comparable to the commercial brands on the market.

Q I noticed Steele looked at the 1R4F?

A Yes.

Q Chepiga looked at the 1R5F?

A Yes.

Q So in fact there were published results on two different reference cigarettes; correct?

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A Yes.
Q That was done because those reference cigarettes each are most relevant to different sets of cigarettes that are already on the market; is that right?
A That's correct.
Q Now, how does Reynolds use information from the market surveys that it has done like the Steele work and the Chepiga work in its product design and development work?

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A I have alluded to that a few times. When you do a large number of cigarettes, you get a very representative sample of what a particular tar category -- what the Ames activity or the toxicity of the cigarette smoke from a group of cigarettes are.
So that Ames activity then gives you a distribution. So some of the cigarettes are right in the middle, some are a little high, some are a little low.
What you can determine statistically, using statistics, so that when you make a change in a product you need those data to benchmark, to give you the target.
If your toxicity is going up, how do you know that? You can't know that unless you have some data to compare it against. So it was important for us to collect those data and have those data, and we made those data available to other researchers by publishing them.
We use it in a comparative way to make sure the changes we have made have not altered the toxicity one way or another. If we are intending to lower it, we can then use it to judge when our reduced-risk product development has actually lowered that toxicity.

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We have a lot of data showing that a lot of our developments have lowered toxicity.
Q I want to put this in context. Would you agree with me that cigarettes are inherently a risky product?
A Yes, they are.
Q As I understand the product stewardship, at least the component of it that you have been describing to us so far, is a set or a program that Reynolds has in place to make sure that it does not do anything inadvertently to increase the risk or toxicity of cigarette products; is that correct?
A That's right. It's a reasonable thing to do, that when you -- we know we have aproduct that has inherent risks associated with it. The toxicity of that smoke has been well characterized by us and by others. We have benchmarked it and described it.
It's important that whatever we do to that product as we try to meet consumer demands, that we don't add to that inherent risk that's associated with that. I think that companies that are functioning today and selling consumer products, it's important for them to be able to do that testing and we have done that testing for many years.

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Q In addition to making sure that Reynolds do not do anything to make the product more risky, has

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Reynolds been working for decades to try to make their products less risky?

A Yes, we have worked really hard on that.

MR. FURR: I am going to enter an area that is very large, and I prefer not to break it up, if we can break for the night.

THE COURT: That would be fine.

Remember tomorrow morning we are starting at 8 o'clock and we are going to go straight through until 1:15. Then we're going home. There is no lunch. We'll take a couple breaks in the morning, so bring an apple or something. Also, as you go out, I'm told -- watch your step. There is some stuff all around here. There are wires or something. Just be a little careful. We don't want to end up with another lawsuit here, see.

So we'll see you tomorrow morning. Don't discuss the case among yourselves. Don't permit anybody to discuss it with you. Don't read about it. Don't do anything. See you tomorrow at 8 o'clock.

Doctor, you may be excused. I will give you the admonition. You are still on the witness

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stands, so please don't discuss your testimony with anyone. It doesn't mean that you can't meet and socialize and talk about many other things, but not about your testimony. All right?

THE WITNESS: Okay.

(Witness steps down.)

(Discussion off the record.)

THE COURT: I want to discuss the curative instruction before you leave, if I can find it.

(Discussion off the record.)

THE COURT: I was handed a curative instruction this morning concerning informing the jury as to whether members of the class can quit smoking.

Who wants to -- do you have a copy of it?

MR. FURR: Yes, sir, I do. I would like to address it.

THE COURT: All right.

MR. FURR: Your Honor, we object --

THE COURT: Assuming that I'm not going to give, in order to correct the false impression, don't waste your energy on that one.

MR. FURR: I wasn't going to.

THE COURT: Okay.

MR. FURR: We object to this instruction for

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two basic reasons: Number one, I believe it's simply a mistatement of what is and is not relevant in this case, and, second, I believe that it's highly prejudicial and it undermines a defense that this Court has already ruled that we could advance in this case.

I think, to put it all in context, we have to look both at some -- at least in terms of this case, the distant history of this case and the very recent history; i.e., what happened yesterday.

Now, with respect to the distant history -- I'll go through this quickly. Addiction is in this case over the objection of the defendants. We all know that.

The Court has ruled and permitted the defendants to explain addiction to the jury, at least

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in the following way: That one thing addiction doesn't mean is that it doesn't mean you can't quit. Defendants have been permitted to tell the jury that addiction doesn't mean you can't quit, and in fact millions and millions and millions of smokers have quit, and that the plaintiffs' claims in this case don't depend on their addiction status.

As the Court recognized early on, a key component of our defense is that quitting's the answer,

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not medical monitoring, and if you quit, you don't need this medical monitoring program that plaintiffs are suggesting.

With that being a key component of our defense, implicit in that is that people can quit. I mean, the defendants would be put in a highly prejudicial and really a ridiculous position if a key component of our defense was quitting and the plaintiffs were allowed to say addiction in this case and we weren't allowed to prove that addiction doesn't mean you can't quit. Therefore, the ability to quit is relevant. That's sort of the distant history of what happened here.

But yesterday is very important, because what happened yesterday is that during the cross-examination of Dr. Spagnolo, Mr. Segal cross-examined him with documents containing statements recommending spirometry that were all made at least in the context of, and I submit in part, dependent upon a cessation program that was also being recommended in those papers.

We talked about that with the Court, and the Court overruled our objections on that issue and told us that what we could do was to cross-examine -- I should say redirect the witness on the fact that those

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recommendations were made in that context.

But then Mr. Segal took it a step further and he put that document in front of the jury that said, quote, "It should become easier for clinicians to detect the initial decline in lung function for smokers and to encourage their patients' efforts to stop smoking." And you certainly agreed with the second part of that.

In other words, he did exactly what the Court had ruled in liminae that he could not do, and he suggested that a benefit of the monitoring program would be that, armed with the information of perhaps a decrement in lung function, the doctors would have added ammunition to try to convince people that you really should quit, you, yourself, need to quit because it's hurting you, and maybe if I tell you this, it will give you the motivation or increase your ability to quit; i.e., they need some motivation or some encouragement because otherwise they can't quit.

This is all in the context where the plaintiffs are absolutely forbidden to say that people can't quit or that they need help quitting.

In response to that, what Mr. Woodside did, which brought us to this, is he asked a question -- I'm

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not going to suggest that it was artfully done, but I believe it's been overinterpretd. The words that Mr. Woodside used at the beginning of his question was,

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"They can quit. They don't need spirometry."
He didn't at that point link it to the ability to quit. He simply presented it, I believe, as an alternative; i.e., if you quit, you don't need spirometry. And that's the defense that we are absolutely permitted to advance. There was no linking it at that point with the addiction status. He simply said, "They can't quit. They don't need spirometry.
THE COURT: It's the syntax that really -- that's the area of concern. Everything you said up until this last point I don't disagree with at all. And if we didn't have this phrase, "They can quit. They do not need spirometry" -- if we didn't have that here, we wouldn't be having this discussion.
MR. FURR: No, but if you consider what we can say Your Honor, we can say smokers can quit.
THE COURT: They should quit. You can -- I don't mean to be that pedantic, that we are just really -- how many angels dance on the head of a pin. It's a rather affirmative statement that they can quit.
Now, I believe that the proffered curative

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instruction goes beyond addressing that. What has always been said in this case here is that the plaintiffs are not claiming -- something along these lines: They are not claiming that they can quit. I think that's the essence of it.
MR. WOODSIDE: Can't quit.
THE COURT: That they cannot quit.
MR. FURR: They have always said that. Mr. Rodes has said.
THE COURT: These the -- and I -- they are not claiming they cannot quit. Let me make sure I get that again the right way.
If we're going to say anything, I -- that's the only thing we would say, that -- and we said it once, I think. I don't know if I have given a curative instruction. Maybe it's all been on that federal FTC tar test. Maybe that's the only curative instruction I have given.
MR. FURR: I think it is, Your Honor.
THE COURT: I may have given that twice. Anyhow, I do -- throughout this case there has been a -- there's never been a claim by the plaintiffs that they cannot quit, period.
I think that is sufficient to continue what

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may be a misstatement and, quite frankly, in the morass of all the words in this case, it may not have a great deal of effect, no effect at all. I don't know.
But I -- the idea of saying whether the class members can quit smoking is not at issue in this case, you should therefore disregard any suggestion that class members can or cannot quit, that clearly cannot be given. That has never been a possibility in this case.
As a matter of fact, it's just the opposite. The only -- when Mr. Woodside said, "They can quit," that brings into, I believe, a need to say that the plaintiffs are not claiming that they cannot quit. It's a way to counter things. That's how I see it.
MR. FURR: I agree, Your Honor.
MR. RODES: Your Honor, may plaintiffs be

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heard on this?
THE COURT: Oh, sure.
MR. RODES: Your Honor, first, just to clarify what we are asking for, only the bold language at the bottom is what we are asking for. The beginning is prefatory.
THE COURT: I understand that.
MR. RODES: I need to go into a little tiny

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bit of history first. I'll go to the recent history first.
What occasioned our request for this curative instruction was that Mr. Woodside said that the class members are not addicted, and we objected, and the Court admonished Mr. Woodside and told him not to say it again.
We said we would like a curative. The Court said it would consider it. And then he came back and he said it again. Only he did not just say they can quit in the context of so they don't need spirometry. He said -- he said that they are not claiming that they are addicted, they can quit. So he directly linked it to any claim of addiction. And we believe this was a direct violation of the Court's order that had been given very shortly before that, and we do not believe it's appropriate for the Court to reward them by compounding that with a curative that does not cure, but, rather, gives the imprimatur of the Court on this improper argument. I need to explain why I think that what the Court is proposing to do --
THE COURT: Then I won't do anything. Then I won't do anything. That's fine.
Now, if you think that giving what I'm

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suggesting would have a tendency to be -- to distort or be more prejudicial, I'm not going to quarrel with you on that. I just simply will not do anything.
MR. RODES: Your Honor, just to make our position clear, the defendants have made the same argument that the Court had proposed as a curative; that is to state that the plaintiffs are not claiming that they are not addicted.
We have objected to that, and I believe we have preserved our objection every time -- we certainly intended to -- because we believe that the structure of this case is that the fact of addiction or nonaddiction of any individual class member is not relevant. We have never stipulated that every single class member is not addicted. It's just whether they are or are not is not relevant. That's why the issues are common, because the addiction status of individual class members are not relevant.
THE COURT: Mr. Rodes, I just don't agree with that, sir. I really don't. Addiction is in this case in one area, in as it relates to product design, and we have already touched on that, and I'm not going to rehash that at all.
The fact that the plaintiffs can quit is a

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monitoring device, is something that the defendants have been able to use in this case from day one. It's in here, and therein lies -- I'm just repeating myself. In order to get where we are today, in terms of the

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certification of the class, that has to be it, and you can't keep chipping away at it, sir.

MR. RODES: We are not trying to, Your Honor.

THE COURT: That's exactly what you are doing. It really is. I wasn't happy with the phrase that "they can quit." I'm not -- I mean -- it wasn't right, but I -- I don't know -- the only way I know how to cure it is to say that the plaintiffs are not claiming that they cannot quit.

Beyond that, I think you are shooting a canary with a cannon. And it really is -- I'll just let you preserve your point, and we will move on.

I'm not going to revisit this addiction and quitting issue every time. I would only admonish the defendants -- I mean, that -- the way to use it is up to the time they can -- when you said they can quit, it was used properly. In terms of is that a -- is that what they should do in lieu of spirometry, for example, quitting. But -- and I would say just don't do that again.

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MR. WOODSIDE: I'll try my best, Your Honor.

MR. KLEIN: He'll do better than that, Your Honor.

THE COURT: If you continue to do it, I may have to then come back and do something that you're not going to be happy with.

MR. FURR: We understand, Your Honor.

MR. RODES: Thank you, Your Honor.

THE COURT: All right. The instruction is proffered, ordered filed and made a part of this proceeding and your objection is preserved.

MR. RODES: Thank you.

THE COURT: Anything else? See you tomorrow morning at 8 o'clock.

(Thereupon, at 5:11 p.m. the hearing was adjourned.)

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